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(DR. R. GREY'S)

MEMORIA TECHNICA,

OR METHOD OF

ARTIFICIAL MEMORY,

APPLIED TO AND EXEMPLIFIED IN

Chronology, History, Geography, Astronomy.

ALSO,

JEWISH, GRECIAN, AND ROMAN COINS, WEIGHTS, MEASURES, &c.

TO WHICH ARE SUBJOINED,

LOWE'S MNEMONICS

DELINEATED,

IN VARIOUS BRANCHES OF LITERATURE AND SCIENCE.

A NEW EDITION, CORRECTED.

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PREFACE.

II' may be proper to acquaint the reader with what improvements have been made in this work since its first publication. In the tables of the patriarchs and ancient kings, care has been taken to signify, with the utmost brevity, the relation which every person bore to his immediate predecessor. In the geographical part, besides the adding of many remarkable places both in ancient and present geography, the memorial lines for the general and particular divisions have many of them been formed anew, with particular regard to the situation of the respective kingdoms, provinces, or countries into which those divisions have been made; so that every line is in some measure the epitome of a map. The tables of ancient coins, weights, and measures have been carefully reviewed, and very much augmented; and decimal tables subjoined, of great use for the more speedy and exact reduction of them. There is likewise added an Index of the historical, chronological, and geographical words; of the usefulness of which is given an account in the proper place. Besides these, there are several alterations and additions of less moment, interspersed throughout the whole; such as either my own experience or the judgment of my friends had suggested to me, in order to render the design more useful. I shall not trouble the reader with the reasons of them, which, if he compares the editions, he will very probably find out himself: nor do I think it necessary to apologize for having made them, since it could not be expected that an invention

of this kind should be so perfect at first, as not to be capable of being considerably improved. And I was the more willing to bestow some care and pains upon it, and to give it what improvement I was able, in return for the favourable reception it has met with from the public, beyond what was expected by myself or others. An Art of Memory has by many been looked upon as a thing either in itself impracticable, or, at least, in the common methods of it, useless and trifling. And I was sensible that the following method would lie under the additional disadvantage of a whimsical and out of the way appearance; besides that, the seeming difficulty of it at first sight would, I foresaw, deter many from so much as attempting to make themselves masters of it. Notwithstanding these discouragements, it has ha the good fortune to give some satisfaction, and to meet with some success; and will, I hope, continue to be looked upon as an useful help to those who delight in reading, and would retain what they had read with faithfulness and accuracy, particularly in such points wherein their memories are most likely to fail them.

The objections which have been made to it from the difficulty of remembering the memorial lines would most effectually be removed by habituating young minds to them betimes, by the frequent transcribing and repetition of them. The technical words would by this means become natural and familiar, and of no small advantage to them in the course of their future studies; they would be easily received and long retained. But I shall say no more upon this point, having already touched upon it in the Introduction; to which also I refer the reader for what might further be expected by way of Preface.

INTRODUCTION.

T is a general complaint amongst men of reading, and to many a discouragement from it, that they find themselves not able to retain what they read with any certainty or exactness. And in no part of literature is there greater toom for this complaint than in History: to the studying of which with pleasure and improvement, as nothing contributes more, so nothing has been thought more difficult to be retained, than a distinct and accurate knowledge of Chronology and Geography. Upon this account several attempts have been made to remedy, in some measure, the defects of the memory, by chronological and geographical tables, cuts, and maps, and by reducing the principal parts of history to certain epochas or æras, so disposed and contrived, as may be most likely to affect the imagination, and make the deeper impression upon the mind. Thus Mr. Hearne, in his Ductor Historicus, has reduced the whole rompass of chronology to thirteen grand epochas, all beginning with the letter C. Dean Prideaux, in his Introduction to History, has made use of the number seven, throughout his whole book; "not out of affectation (as he tells us) but experience, as most easy for the memory;" with others of the like nature, which serve at least to show that the memory wants assistance, and that small helps are better than none. But of all the inventions made use of for this end, none has been found to contribute more to the essistance of the memory than that of technical verses; ooth as they generally contain a great deal in a little compass, and also because being once learned, they are seldom or never forgot. For the truth of which I may venture to appeal to the weakest memories, whether they have not to the last found themselves in possession of that ever-memorable line,

Barbara Celarent Darii Feiro Baralipton.

Of this nature is the following method; the design of which is, not to make the memory better, but things more easy to be remembered; so that by the help of it, an ordinary, or even a weak memory, shall be able to retain what the strongest and most extraordinary memory could not retain without it. For, as he, who first contrived to assist the eye with a telescope, did not by that pretend to give sight to the blind, or make any alteration in the eye itself, but only to bring the objects nearer, that they might be viewed more accurately and distinctly; so neither is it pretended* by this art to teach those to remember every thing who never could remember any thing; or to make men in an instant skilful in sciences which before they were utterly unacquainted with; but only to enable them to retain, with certainty and exactness, what they have already a general and competent knowledge of: that they may not be obliged upon every occasion to have fresh recourse to their books or maps, or be under the tiresome necessity of reading the same things again and again, still forgetting them as fast as they read them.

To those who may object, of what use is it to be thus exact, and content themselves with an imperfect and confused remembrance of what they read; it might be answered,

^{*} Have are tota habet hanc vim, non ut totum aliquid cujus in ingeniis nostris pars nulla fit, pariat et procreet; verum ut ea, que sunt orta jam in nobis et procreata, educat atque confirmet. Civero de Orat re, lib. ii. edit. C. Steph, p. 182.

that such as think it of no use, need not, as I presume they will not, trouble themselves about it; this being designed for the benefit of those only who think it is of use; and who, even at the expense of a little pains, would remember if they could: but, besides this, I believe it will be agreed on all hands, that to instance in history only, a man who has an exact notion of time and place, finds incomparably more pleasure, and makes a speedier progress in that study than he who has not.

I shall here beg leave to transcribe a passage from Addisson's Dialogues, upon the Usefulness of Ancient Medals: "There is one advantage, says Eugenius, that seems to me "very considerable, which is the great help to memory one finds in medals: for my own part, I am very much embarrassed in the names and ranks of the several Roman emperors, and find it difficult to recollect upon occasion the different parts of their history: but your medalists, upon the first naming of an emperor, will immediately tell you his age, family and life. To remember where he enters in the succession, they only consider, in what part of the cabinet he lies; and by running over in their thoughts such a particular drawer, will give you an account of all the remarkable parts of his reign."

If this be such a considerable advantage in medals, I hope it will be allowed that the following method is of some use, since by it a man may be enabled to remember when any emperor, from Julius Cæsar to Jovian, began his reign, and that as readily as you can name him, by the help of no more than seven memorial lines. The like he may do, with the same ease and readiness, by the kings of England, and so proportionably for any other part of sacred or profane history. For, how impracticable soever it may seem at first view, I have reason to believe, that any reader of a

common capacity may, by a regular proceeding and ordinary application, be able readily and exactly to answer most if not all, the questions that can be proposed, from the following tables.

The manner in which I would advise him to proceed (after having premised that he must not be too hasty at first, but make himself * master of one thing before he proceeds to another, beginning with such particulars as he has most occasion or inclination to retain) is this. First, let him learn to explain the several memorial lines, according to the method hereafter to be laid down, by consulting the tables to which they belong. 2. This done, let him, by looking upon the tables, learn to make out the lines; and 3, Let him charge his memory with them, by frequent repetition. - By this means the words will become familiar, how harsh and uncouth soever they may appear at first; and he will find it as easy to know the diameter, distance, and magnitude of any planet; the particular time or age of any remarkable person or thing; the longitude and latitude of any place, and the like, as it is to remember their names: the whole art being in effect nothing more than this; to make such a change in the ending of the name of a place, person, planet, coin, &c. without altering the beginning of it, as shall readily suggest the thing sought, at the same time that the beginning of the word being preserved, shall be a leading or prompting syllable to the ending of it so changed.

I would willingly here let the reader a little more into my meaning, which he may not otherwise so readily

^{*} Assumendus usus paulatim, ut pauca primum complectamur animo quæ reddi fidelitur possint: mox per incrementa tam modica ut onerari se labor ille non sentiat, augenda usu et exercitatione multa continenda est, quæ quidem maxima ex parte memoria constat. Quintilianus, lib. x. edit. Gibson. Ox. p. 534.

apprehend, lest he should think there is more difficulty in the matter than there really is. I would ask him, then, if he thinks he could remember to call Cyrus, Cyruts; Daniel, Daniull; Alexander the Great, Aléxita; Julius Cæsar, Julios Cæsar; or Маномеt, Máhomaudd. If he can but do this, he has nothing else to do (when he is once master of the general key, and knows what letters of the alphabet stand for what figures) in order to remember, without any possibility of being mistaken, that the years in which Cyrus, Alexander, and Julius Cæsar founded their pective monarchies, were as follow:—

							\mathbf{B}_{0}	efore Christ.
Cyrus-Cyruts								536
Alexander—Aléxita								331
Julius Cæsar—Julios								46

And that the Mahometan æra, or flight of Mahomet was A.D. 622.—In like manner for Geography. Does he think he could remember to call Madrid Madroy-t, or Jerusalem Jeruta-ts, or Blenheim Blenhebav, or Thessaly Thessjan? This is all that is required,—to remember that the degree of latitude of Madrid is about 40, and the *longitude about 3; the latitude of Jerusalem about 31, and the longitude 36; that Blenheim is in Bavaria, and that what was the ancient Thessaly is the present Janna. Thus the reader will observe, that all that he has to do, is for one word to remember another, which only varies from it a little in the termination.† And to make even this easier to be remembered.

^{*} The reader is presumed to be so far acquainted with geography, as to be able to tell which is eastern and which is western longitude, when he is informed that the first meridian is fixed at London.

[†] In many words the variation is very small: as K. John K. Jann. Inachus Inakus, Solon Solun, Herodotus Herodofus, Plato Platok, Trajan Trajank, Cleopatra Cleopatla, Gordian

the technical words are thrown into the form of common Latin verse, or at least of something like it. For as there was no necessity to confine myself to any rules of quantity or position, I hope I need make no apology for the liberty I have taken in having, without regard to either, and perhaps now and then without so much as a regard to the just number of feet, only placed the words in such order as to make them run most easily off the tongue, and succeed each other in the most natural manner. But this by the way for the reader's encouragement.

In the mean time, till he can repeat the *memorial lines*, and to those who are not willing to give themselves any trouble at all in charging their *memory* with them, the *tables* themselves will not be without their use; of which it may be expected that I should give some account.

For the chronology and history I have chiefly consulted* Archbishop Usher's Annals, Marshall's Chronological Tables, the Rationarium Temporum of Petavius, Mr. Hearne's Ductor Historicus, and Bishop Beveridge's Institutiones Chronologica. The succession of the Assyrian and Babylonian Monarchs, the Kings of Persia, Media, Syria, Egypt, &c. are taken from Dr. Prideaux's Chronological Tables, at the end of his Connexion; the times of the flourishing of the Fathers, Heretics, Councils, &c. from Dr. Cave's Historia Literaria. The Roman Emperors, and the time of writing of the canonical books of the New Testament, from Mr. Eachard's Roman and Ecclesiastical Histories. The Legatine

Gordin, the battle of Marathon Marathonz, Artila Attifla, Cresus Cresuse, Austin Austins, &c. Those which appear more difficult will be full as easy, when familiarised by use.

^{*} It may be some satisfaction to the reader to know, that Mr. Bedford (as he tells us in the Preface to his Scripture Chronology) never differs from Dr. Prideaux; and even from the creation of the world to the destruction of Jerusalem, never above five years from Archbishop Usher, the late Bishop of Worcester, or Mr. Marshall,

and Provincial Constitutions from Bishop Gibson's Codex Juris Evclesiastici. The astronomical calculations are from Dr. Derham's Astro-Theology. I have also added Mr. Whiston's, from his Theory of the Earth. In the geographical part, my chief guide has been Dr. Wells's Treatise of ancient and Present Geography, whose Maps may be consulted by the learner. For the coins, weights, and measures, I have chiefly been obliged to Dr. Arbuthnot's books and tables, not without consulting Bishop Cumberland, Dr. Bernard, and Bishop Hooper, and other writers upon that subject, of whom I have made what use I thought convenient. If any prefer other authors, who differ from these, they may easily apply the art to their favourite author, by a change of the words, according to the method laid down. And, indeed, when the reader is perfectly master of it, he would do well to form words for his own use, which perhaps he will sooner remember than those which I had formed for mine; my design being rather to give a specimen of what might be done by it, than a set of complete tables in the respective sciences.. If some think I have been deficient in leaving out what they suppose worthy of remembering, others perhaps will think I have been too full. To both these I answer, that I impose no task upon my readers, nor desire to prevent their own improvements: they may add what they please, and pass by what they please. Nor do I think it at all necessary that they should be able to answer every particular in the following tables; only this I may venture to affirm, that if they once charge their memory with them, they will find them no burden, and that it is not only practicable, but easy to be done.

It is not to be expected that gentlemen, who have gone through the course of their studies, will trouble themselves to begin again anew, and go regularly through the whole;

but it is submitted to those who have the education of young students in the universities and public schools, whether it would not be of some service towards facilitating the progress of their pupils and scholars in useful knowledge, to have them early and thoroughly acquainted with this small treatise. It is the advice of Quintilian, that boys should be used to repeat, as fast as possible, harsh and crabbed words and verses, purposely made difficult, in order to give them a more full and articulate pronunciation. His words are these: * Non alienum fuerit exigere ab his ætatibus, quo sit absolutius os et expressior sermo, ut nomina quædam versusque affectatæ difficultatis, ex pluribus asperrime coëuntibus inter se syllabis catenatos et veluti confragosos quam citatissime volvant. The frequent repetition of the following memorial lines would certainly answer this end, and at the same time a much better; and if I might also recommend, as he does, the writing of them too, in order to make the deeper impression, it would doubtless have a good effect, and boys would be treasuring up learning even before they were aware of it. † Illud non panitebit curasse cum scribere nomina puer (quemadmodum moris est) caperit, ne hanc operam in vocabulis vulgaribus et forte occurrentibus Protinus enim potest interpretationem linguæ secretioris quam Græci γλώσσας vocant, dum aliud agitur, ediscere, et inter prima elementa consequi rem postea proprium tempus desideraturam. It may be sufficient to have just hinted these things to those whose more immediate province it is, and who are best qualified to judge what methods may most effectually contribute to the improvemen of those under their care.

From the account I have given of it, the reader will

^{*} Institutiones Orat. edit. Gibson. Oxon. p. 12. + Ibid.

observe, that the method here proposed is perfectly different from that of Simonides the Cean,* so famous among the ancients for being the first inventor of an art of memory, † of whom both Tully and Quintilian speak with respect, and of whose method of ‡ places and images (i. e. of having a repository of ideas, a large house, or the like, divided into several apartments, in each of which you are to place in order a symbolical representation of the things which you would remember) they have given us a very full and particular account, as also of the occasion which first gave rise to it. What improvements have been made of this method by some modern authors, or in what manner or with what success others have set up to teach privately the art of

^{*} Σιμωνίδης δ Λεωπρέπους, δ Κεῖος, Ο ΤΟ ΜΝΗΜΟΝΙΚΟΝ ΕΥΡΩΝ, ενίκησεν 'Αθήνησιν διδάσκων, καὶ αί εἰκόνες ἐστάθησαν 'Αρμοδίου καὶ 'Αριστογείτουσς, ἔτη ΗΗ.—Marm. Arund. i. 1. 70.

De Simonide hoc vide Joannem Tzetzem, Chiliade i. cap. 24, ubi victorias reportasse ait quinquaginta sex. Consule etiam Valerium Maximum, lib. iv. cap. 7.

⁺ Non sum tanto ego, inquit, ingenio quanto Themistocles fuit ut oblivionis artem quam memoriæ malim; gratiamque habeo Simonidi illi Ceio quem primum ferunt artem memoriæ protulisse. Cicero de Oratore, lib. ii.

[‡] Constat artificiosa memoria locis et imaginibus, &c. Cicero ad Herennium, lib. iii. edit. Car. Steph. p. 30.

Loca discunt quam maxime spatiosa, multa varietate signata, domum forte magnam, et in multos diductam recessus. In ea quicquid notabile est animo diligenter affigitur, ut sine cunctatione ac mora partes ejus omnes cogitatio possit percurrere.

Tum quæ scripserant, vel cogitatione complectuntur, et alio signo quo moneantur, notant. Quod esse vel ex re tota potest, ut de navigatione, militia: vel ex verbo aliquo. Nam etiam excidentes, unius admonitione verbi in memoriam reponuntur: sit autem signum navigationis, ut anchora; militiæ, ut aliquid ex armis. Hæc itaque digerunt; primum sensum vel locum vestibulo quasi assignant, secundum atrio, tum impluvia circumeunt, nec cubiculis modo aut exedris, sed stratis etiam similibusque per ordinem committunt. Hoc facto, cnm est repetenda memoria, incipiunt ab initio loca hæc recensere, et quod cuique crediderunt, reposcunt, et eorum imagine admonentur, &c. Quintiliani Institutiones Orat. lib. xi. edit. Gibson, p. 561.

memory, I am altogether ignorant. Having found my own method sufficient for myself, I had no inclination to look after any other. What use it may be of to the public, must be left to experience. The novelty of it may perhaps recommend it to the inquisitive and curious; and I desire nothing more than that into whose hands soever it may fall, they would not be prejudiced against it upon the account of its seeming difficulty, before any have made trial of it; being inclined to think, that to any one, who is at all acquainted with it, it will be found to be so far from being really difficult, that nothing can be more easy, or more obvious. The representation of numbers by letters of the alphabet hath been a thing in practice, more or less, almost in every language. The only thing wanting was to make that representation further useful, by substituting vowels, as well as consonants, for the numerical figures, in such manner and proportion, that any number might be formed into a word capable of being articulately pronounced, and consequently more perfectly remembered. Amongst the Jews. indeed, of whose alphabet the vowels are no part, it was a practice, not only to abbreviate sentences and names of many words, by putting together the initial letters of those words, and making out of them an artificial word * to express the whole; but also to make use of natural words, to represent numbers, when they could meet with such as happened to answer the number they wanted to express. We have several pieces of ingenuity of this kind in the

^{*} As Rambam for R-abbi M-oses B-eu M-aimon; Ralbag for R-abbi L-evi B-en G-erson; Maccabees from the abbreviation of the words in the standard of Judas Maccabeus, M-i C-amoka B-aëlim J-ehovah, i. e. Who is like unto thee amongst the gods, O Lord! See Prideaux's Connnexion, part. ii. book 3. Of this nature is what the reader will meet with in the beginning of the geographical part of this method, page 47, &c.

frontispieces of their Bibles, where they give us the year of the edition in some word or sentence of Scripture, the letters of which, according to their numerical value, make up the date. I have subjoined* some of them for the entertainment of the learned reader, from Bishop Beveridge's Arithmeticæ Chronologica. And indeed I am not certain whether I owe not to observations of this kind, the first hint of this method, which I have carried so far, and which, doubtless, like all other inventions, is still capable of further improvements.

What is added of the miscellany kind, is a small part of what I had drawn up for my own use, and shews how easily this art may be applied to almost every part of learning. If

[·] Sed non omittendum est, Judæos in librorum præcipue titulis, ad annum quo impressi sunt indigitandum, literas numerales alio atque quem tradidinius ordine collocare. Enimvero vocem unam vel plures, easque vol seorsim, vel in sententia aliqua Biblica comprehensas excogitant, quarum literæ utut dispositæ numerum propositum valeant. Ex. gr. In Bibliis Sacris a Josepho Athia Amstelodami editis, tria occurrunt frontispicia, unum ad Pentateuchum, ad Prophetas alterum, tertium ad Hagiographa. Primum impressum dicitur שנת לשני עט ספר מהיר לפק Anno computi ninoris lingua mea est stylus scribæ prompti. Ps. xlv. Ubi voces 750 by ut virgulis superne notate annum indigitant quo Pentateuchus impressus svit. Quotus autem suit annus computi Judaici minoris statim inveniatur, si omnes vocum instarum literæ una cum numerico carum valore ita disponantur, y 70 b 9 5 60 5 SO 7 200.=419. Ergo annus erat 419 juxta computum Judæorum minorem, de quo videris chronologicas nostras institutiones. Sie et prophetæ impressi dieuntur בשנת משא ני הזין לפק. Onus vallis visionis computi minoris. Is. xxii. Ubi litera משא י valent 420. Frontispicium autem ad בי הוין sive Hagiographa impressum es' anno בתובים באצבע אלהים scripta digito Dei. ubi primæ duæ llieræ vocis בתובים annum eundem 420 significant. Nam n valet 400, et ב 20. Hunc etiam in modum Talmud Basileæ impressum dieitur שית פרות שלח לעבוי Anno redemptionem misit populo suo. Ps. exi. Ubi literæ vocis שלר valent 33S. Denique Seder Tephilloth Hispaniensis, sive Judæorum Hispanorum liturgia ingeniosissime impressa, dicitur אית הואת Hoc Anno, i. e. Anno 413, quem literæ nam indigitant. Lib. i. c. 6. p. 211, 212, 4to, 1669.

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upon the whole this attempt shall be found to contribute to the more speedy attainment of useful knowledge, and to give men of reading, instead of an imperfect and confused remembrance of what they read, a satisfactory certainty and exactness, as I cannot think the little time I have spent upon it ill bestowed in respect of my own improvement, so I shall be glad that it proves of as much benefit to others as I have found it to myself.

Recommendatory character of GREY'S MEMORIA TECHNICA, written by the Rev. Mr. Lawson, some years Head Master of a Foundation Grammar School, at Wolverhampton; given in the preface of a work published by him for the use of his pupils.

The probable reasons why Grey's Memoria Technica has not been more generally received in Grammar Schools, where any separate regard is paid to History and Chronology, are, that it abounds with matter which has not a strict relation to classical authors, and that it is extended to branches of knowledge, such as Geography, Astronomy, &c. where the necessity of the art is not so evident, and the difficulty of application much greater.

In defence of this art as a subsidiary aid to young persons in History and Chronology. I will not say, that by the help of it the weakest memory may be able to retain what the strongest could not retain without it; but I have no scruple in recommending it to those who wish to avoid the necessity of perpetual recurrence to chronological maps or tables, and who prefer accuracy and fidelity to confused recollection and imperfect remembrance. It does not, indeed confer a new faculty, but it teaches us to manage with skill the capacity of the memory, and contrives such helps as greatly assist its natural powers.



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MEMORIA TECHNICA.

SECTION I.

THE principal part of this method is briefly this: to remember any thing in history, chronology, geography, &c. a word is formed, the beginning whereof being the first syllable or syllables of the thing sought, does, by frequent repetition, of course draw after it the latter part, which is so contrived as to give the answer. Thus, in history, the Deluge happened in the year before Christ two thousand three hundred and forty-eight; this is signified by the word Deletok: Del standing for Deluge, and etok for 2348. In astronomy, the diameter of the sun (Solis Diameter) is eight hundred and twenty-two thousand one hundred and forty-eight English miles; this is signified by Sol-diked-áfei; Sol-di standing for the diameter of the sun, ked-áfei for 822,148; and so of the rest, as will be shown more fully in their proper place. How these words come to signify these things, or contribute to the remembering them, is now to be shown.

The first thing to be done is to learn exactly the following series of vowels and consonants, which are to represent the numerical figures, so as to be able, at pleasure, to form a technical word, which shall stand for any number, or to resolve a word already formed into the

number which it stands for:

a	e	i	0	u	au	oi	ei	ou	y
1	2	3	4	5	6	7	8	9	Ŏ
					S				
					-				

Here a and b stand for 1, e and d for 2, i and t for 3, and so on.

See also other signs at page 4.

These letters are assigned arbitrarily to the respective figures, and may very easily be remembered. The first five vowels in order naturally represent 1, 2, 3, 4, 5. The diphthong au, being composed of a 1 and u 5, stands for 6; oi for 7, being composed of o 4 and i 3; ou for 9, being composed of o 4 and u 5. The diphthong ei will easily be remembered for eight, being the initials of the word. In like manner for the consonants, where the initials could conveniently be retained, they are made use of to signify the number; as t for three, f for four, s for six, and n for nine. The rest were assigned without any particular reason, unless that possibly p may be more easily remembered for 7 or septem, k for 8 or $\partial K_T \dot{\omega}$, d for 2 or duo, b for 1, as being the first consonant, and l for 5. being the Roman letter for 50, than any others that could have been put in their places.

The reasons here given, as triffing as they are, may contribute to make the series more readily remembered; and if there was no reason at all assigned, I believe it will be granted that the representation of nine or ten numerical figures by so many letters of the alphabet, can

be no great burthen to the memory.

The series, therefore, being perfectly learned, let the reader proceed to exercise himself in the formation and resolution of words in this manner:

325 1012 10 381 1921 1491 536 7967 teib aneb afna bybeaztelutspousoi 431 553 680 &c. fib lut seiz &c.

And as, in numeration of larger sums, it is usual to point the figures at their proper periods of thousands, millions, billions, &c. for the more easy reading of them, as 172,102,795, one hundred and seventy-two millions one hundred and two thousand seven hundred and ninety-five; so, in forming a word for a number consisting of

many figures, the syllables may be so conveniently divided, as exactly to answer the end of pointing. Thus, in the instance before us, which is the diameter of the orbit of the earth in English miles, the technical word is D-orb-Térboid-áze-poul; the beginning of the word, D-orb-Tér, standing for the diameter of the orbit of the earth (D-iameter Orbita Terræ), and the remaining part of it, boid-áze-poul, for the number 172,102,795.

N. B. Always remember that the diphthongs are to be considered but as one letter, or rather, as representing only one figure. Note also, that y is to be pronounced as w, for the more easily distinguishing it from i, as syd=602, pronounce swid, typ=307, pronounce twip.

The reader will observe, that the same date or number may be signified by different words, according as vowels or consonants are made choice of, to represent the figures

or to begin the words with, as,

325 tel, or idu, 154 buf, or blo, or alf, or alo, 93,451 ni-ola, or out-fub, or ni-fla, or out-olb, &c.

This variety gives great room for choice, in the formation of words, of such terminations as by their uncommonness are most likely to be remembered, or by any accidental relation or allusion they may have to the thing sought. Thus the year of the world in which Æneas is supposed to have settled in Italy is 2824; but as this may be expressed either by ekef or deido, I choose rather to join deido to Æneas, and make the technical word Enedeido than Ænekef, for a reason which I think is obvious. Thus King John began his reign A. D. 199 (one thousand being understood to be added, as I shall show hereafter); but as this may be expressed by anou, or boun, or ann, I make choice of the last, for then it is but calling him Jann instead of John, and you have the time almost in his name. Thus Inachus King of Argos began his reign in the year before Christ 1856; with a small variation in the spelling, it is his name Inakus. More instances of this kind see in page ix. of the Introduction.

To go on with our art: it is further to be observed, that z and y being made use of to represent the cipher, where many ciphers meet together, as in 1000, 1000000, &c. instead of a repetition of azyzyzy, which could neither be easily pronounced nor remembered, g stands for hundred, th for thousand and m for million. Thus ag will be 100, ig 300, oug 900, &c.; ath 1000, oth 4000, otho or othf 4004, peg 7200, dig 2300, lath 51000, am 1000000, azmoth 10,004,000, sumus 65,000,056, loum 59,000,000, &c. The solid content of the earth (Terre Magnitudo) is two hundred and sixty-four thousand eight hundred and fifty-six millions of cubic miles; this is expressed by the word Ter-magnitéso-klaum; Ter-magnit standing for Terræ Magnitudo; éso-klaum for 264,856,000,000, the number of cubic miles; miles

It will be sometimes also of use to be able to set down a fraction, which may be done in the following manner: let r be the separatrix between the numerator and the denominator, the first coming before, the other after it; as $iro \frac{2}{3}$; $wrp \frac{1}{2}$; $pourag \frac{7}{7}\frac{9}{9}\sigma$ or '79; $north \frac{8}{7}\frac{9}{9}\sigma$ or '094, &c. Where the numerator is 1, or unit, it need not be expressed, but begin the fraction with r, as $\frac{1}{2}re$, $\frac{1}{3}ri$, $\frac{1}{4}ro$, &c. So in decimals, '01 or $\frac{1}{100}$, rag; '001 or $\frac{1}{1000}$, rath.

Thus I have given the reader a general view of the principal part of this method, and now proceed to show how I have applied it to history, geography, astronomy, and other parts of useful learning; and, having explained a line or two in each, leave the rest to his own industry and sagacity; and though the geographical parts are not, in this edition, completely modernized, according to the present divisions of the earth, neither are the recent discoveries in astronomy noticed here; yet it is hoped that sufficient is done to answer the student's purpose.

Bef. Christ.

SECTION II.

THE APPLICATION OF THIS ART TO CHRONOLOGY AND HISTORY.

The ages of the world before our Saviour's time are, by chronologers, generally divided into six: the first, from the creation to the deluge; the second, from the deluge to the call of Abraham, &c. according to the following periods:

1.	The Creation of the world					4004
2.	The universal Deluge					2348
	The call of ABraham					1921
4.	Exodus, or the departure of the Isra	elit	es	froi	n	
	Egypt					1491
5.	The foundation of Solomon's Temple					1012
6.	CYRus, or the end of the captivity					-536
	The birth of Christ.					

All this is expressed in one line belonging to Table I., as follows:

Crothf, Déletok, Abaneb, Exáfna, Témbybe, Cyruts.

Cr denotes the Creation, othf 4004, Del the Deluge, Ab the calling of Abraham, Ex Exodus, Tem the Temple, and Cyr Cyrus. The technical endings of each represent the respective year, according to the rules already laid down.

I shall explain two lines more.

Nic-Sil-Con-Aritel, Co-Da-Thé-Mateib, Eph-Ce-The-Nésfib,

Chál-Le-Mar-Eudíola, Co-Vi-Júst-Olut, C-Ag-Co-Po-Monseiz.

These two lines are a short history of the first six General Councils; and every syllable has its distinct signification. The first represents the place where it was held; the second shows who was pope at that time; the third under what emperor; the fourth against what heretic; the fifth in what year of our Lord. Thus the first word is Nic-Sil-Con-Aritel: Nic denotes the council of Nice, Sil pope Silvester, Con the emperor Constantine, Ari the heretic ARIus, tel the year 325. The second word is Co-Da-Thé-Mateib; Co denotes the council of Constantinople, Da pope Damasus, Thé the emperor Theodosius, Ma the Macedonians, teib 381. The third is Eph-Ce-The-Nésfib; Eph the council of EPHesus, Ce pope Celestine, The the emperor THEodosius, junior, Nes the NEstorians, fib the year 431. The fourth is Chál-Le-Mar-Eudíola; Chál the council of CHALCEdon, Le pope LEO, Mar the emperor MARcian, Eudí the errors of Eutyches and Dioscorus, ola the year 451. The fifth is Co-Vi-Just-Olut: Co stands for Constantinople, Vi pope Vigilius, Júst the emperor Jus-Tinian, O the errors of O-rigen, lut the year 553. The sixth is C-Ag-Co-Po-Monseiz; C stands again for C-onstantinople, Ag for pope Agatho, Co-Po the emperor Constantine Pogonatus, Mon the Monothelites, seiz the vear 680.

By this specimen the reader will be able to judge what he is to expect from the following Essay, and what it will cost him to make himself master of it. I would by no means have him discouraged at the difficulty which, at first view, he may apprehend there is, in charging his memory with so many harsh and barbarous lines; for though they may appear to be so to a person unacquainted with them, and, as such, difficult to be remembered, yet when frequent repetition has made them familiar, what can be more easy than to supply the remaining part of a word which you are prompted with the beginning of? as, for instance, to complete Cr—Del—Ab—Ex—Tem—Cyr—with their technical endings, and make them up into the following line, already explained:

Crothf, Déletok, Abaneb, Exáfna, Témbybe, Cyruts.

I have only further to desire the reader to take notice, that, for his greater ease, that part of the memorial words which represents the numbers or dates, is distinguished by *italie* characters; that part which is *roman* answers to the small capitals in the Tables.

TABLE I.

GENERAL EPOCHAS AND ÆRAS, ECCLESIASTICAL AND C	IVIL.
Bet	. Christ.
The Creation of the world—Crothf	4004
The universal Deluge—Déletok	2348
The call of Abraham—Abaneb	1921
Exodus of the Israelites—Exáfna	1491
The foundation of Solomon's Temple—Témbybe .	1012
CYRUS, or the end of the captivity—Cyruts	536
The birth of Christ.	
The destruction of TROY—Tróyabeit	1100
The first Organish Olympis	770
The first Olympiad—Olympois	770
The building of Rome—Rompat	790
Era of Nabonassar—Er-Nabonáspop	141
The Philippic æra, or the death of Alexander—	0.3.4
Phílido	324
the ara of Contracts, or of the Selenciae, caried	
in the book of Maccabees the æra of the kingdom	07.0
of the Greeks—Contractad	
Auno	Domini
The Dioclesian wra, or the wra of Martyrs-	20.4
Diocleseko	284
The æra of the Hegira, or flight of MAHOMET-	
Máhom <i>audd</i>	622
The wra of Y Ezdegird, or the Persian wra—Y ezsid	632
The Memorial Lines.	
Crothf, Déletok, Abaneb, Exáfna, Témbybe, Cyruts	
Tróyabeit, Olympois, Romput & Ær-Nabonáspop.	
Philida Contractad - Diocleseka Mahamandd Y	preid

Though I have no where (except in the ages of the patriarchs before Abraham) made use of any other æra than that of the years before and after Christ, because those being known, it is easy to find the correspondent year of any other æra, according to the common rules laid down in books of chronology, which I shall suppose the reader to be acquainted with; yet, in the more eminent epochas, that he may be able, at first glance, to have a notion of the time of any thing or person which he may sneet with in authors making use of the Julian period and whe æra of the creation of the world, I have also added hem in the following Table.

TABLE II.

						Jul.	Period.	A	ı. Mun.
The Creation of the wor	ld						~710		1
The universal Deluge							2366		1656
The call of ABraham .							2793		2083
Exodus of the Israelites							3223		2513
The foundation of Solome	on'	s T	EM	ple	,		3702	_	2992
CYRUS, or the end of the	ca	pti	vity	7			4178		3468
The destruction of TROY						٠	3531	_	2821
The first OLYMpiad .							3938		3228
The building of Rome							3961		3251
The birth of Christ .							4714	—	4004

The Memorial Lines.

Créppaz, Delpétsau, Démasus, Abmezki, Abpépni, Expidet, Exmélat, Tempipze, Temménne, Cymúntosk, Cyrpoboik, Troypílta, Trómekeb, Olympinik, Olmtéek, Rompinsa, Rómidub, Chrismúndothf, Chrisperifoibo.

EXPLANATION.

The first syllable points out the epocha as before; the addition of p or peri denotes that it is the year of the Julian period; the addition of m or mund, that it is the year of the world.

TABLE III.

CHRONOLOGICAL AND HISTORICAL MISCELLANIES BEFORE CHRIST.

Bef. Christ.
Building of the tower of Babel-Bábedit 2233
MIZraim settles in Egypt-Mizdakk 2188
Destruction of Sodom and Gomorrah-Sódakoup. 1897
Death of Joseph—Joséphasil
Annus S-abbaticus, or the first Sabbatical year-
An-Safff
SAUL first King of Israel—Sauláznu 1095
Jeroboam, or the defection of the ten tribes-
Jéronoil
Jéronoil
extinguishes the kingdom of Israel—Salmpeb . 721
Holofernes invadeth Judæa, and is slain by
Judith—Holoféslu 655
NINEveh destroyed by the Medes and Babylonians
-Ninévsad 612
—Ninévsad
from whence began the 70 years captivity of the
Jews-Jehóiasys 606
ZEDekiah sent in chains to Babylon, and Jerusalem
utterly destroyed by Nebuzaradan, captain of the
guard to Nebuchadnezzar; the end of the king-
dom of Judah—Zedleik 588
dom of oddan—ziedien
[N.B. The kingdom of Israel—Isrelo The kingdom of Junah—Judosk lasted {254 } years.]
The Papulaniana having regulard from Daning
The Babylonians having revolted from Darius Hystaspes, are beseiged by him, and Babylon
taken often a siege of 00 menths by the strete
taken, after a siege of 20 months, by the strata-
gem of Zopyrus—Bab-Dár-Hylas 516
SARDis burnt by the Athenians, in confederacy
with the Ionians, which gave the first rise to the
Persian war against the Greeks—Sardug 500

Bef.	Christ.
ZORO Astres appears at the Persian court—Zoroafne	492
Esther made concubine to Ahasuerus—Esthosa.	461
The feast of Purim instituted in memory of the	
defeat of Haman's plot for the destruction of the	
Jews—Purolt	453
Jews—Purolt	458
NEHEMIAh sent governor to Judæa, rebuilds the	
walls of Jerusalem—Nehemiffu	445
The temple on Mount GERIZim began to be built	
by Manasseh—Gerizózei	408
The translation of the Septuagint-Septepoi	277
Judas M-accabæus—Ju-Mass	166
o data in a data da	
The Memorial Lines.	
Bábedit & Mizdakk, Sódakoup, Joséphasil, An-Saj	ff.
Sauláznu, Jéronoil, Salmpeb, Holoféslu, Ninévsad,	JJ ,
Jehoíasys, Zedleik, [duravit Isrelo, Judosk],	
Bab-Dar-Hylas, Sardug, Zoroafne, Esthosa, Puro	t.
Ezrolk, Nehemiffu, Gerizózei, Septepoi, Ju-Mass.	,
Liziotti, Itotomiya, o cirizotti, o opinper,	
TABLE IV.	
CHRONOLOGICAL AND HISTORICAL MISCELLANIES AF	TER
CHRIST.	
Anno	Domini.
Dispersio Jupæorum, or the destruction of Jeru-	71
salem by Titus—Dis-Judpa	157
Zenobia, Queen of Palmyra, led in triumph to	101
Rome by Aurelian—Zenobdoid	272
Ecclesiæ Pax, or the establishment of Christi-	
anity by Constantine—Ecclesi-Paxtad	312
St. Alban the British Protomartyr—Albantyt .	303
CLOVIS the first Christian King of France—Clovoka	481
LINGUA LATina, or the Latin tongue ceases to be	-101
commonly spoken in Italy—Ling-Latleip	587
commonly spoken in Italy—Ling-Latterp	001

	Domini.
Augustine the monk, sent by Gregory the Great	
from Rome, converts ETHELbert King of Kent	
—Aug-Ethelúnau	-596
CHARLEMagne declared Emperor of the West-	
Charlmeig	800
Charlmeig	1095
Hybernia, or the conquest of Ireland-Hybaboid.	1172
Ottoman the founder of the present Turkish empire	
—Ottadoup	1297
The Mariner's Compass found out-Compatze .	1302
The Papal seat removed to Avignon-Pap-Avatyl	
Walter Loulard, with many of his followers, burnt	
in Austria, for opposing the Romish superstitions	
-Lolatub	1351
Gunpowder invented in Germany by a monk-	
Gunpát fo	1344
TAMerlane the Tartar overcomes Bajazet the Turk,	
and puts him in an iron cage. (The Great Mogul	
is descended from him.)—Tam-Bajatóun (Mog).	1399
SCANDERberg, Prince of Epirus, famous for his	
victories over the Turks-Scanderboft	1443
The invention of Printing—Prinafon	1449
CONSTANTINOPLE taken by the Turks, and an end	
put to that empire—Constantinobóli	1453
Christopher Co Lumbus, a native of Genoa, discovers	
Cuba and Hispaniola—Columbont	1493
1	

N. B. The southern continent of America was discovered about four years after by Americus Vespusius, from whom it took its name.

The Memorial Lines.

Dis-Judpa, Lúcibup, Zenobdoid, Ecclesi-Paxtad, Albantyt, Clóvoka, Ling-Latleip, Aug-Ethelúnau, Charlmeig, Croisáznu, Hybaboid, Ottadoup, Compatze, Pap-Avatyl, Lolatub, Gunpátfo, Tam-Bajatóun (Mog), Scanderboft, Prinafon, Constantinobóli, Columbont.

TABLE V.

THE REGAL TABLE OF ENGLAND SINCE THE CONQUEST, AND
SOME OF THE MOST REMARKABLE PRINCES BEFORE IT.
Bef. Christ.
Casibelannus chosen chief commander by the
Britons against the invasion of Julius Cæsar-
Casibelud
Anno Domini.
Queen Boadicea, the British heroine, being abused
by the Romans, raises an army and kills 7000-
Boadaup
the Britain against the Saxons to the assistance of
the Britons against the Scots and Picts—Vortig fos
tig fos
the first of the heptarchy—Heng ful , . 455
King Arthur, famous for his powerful resistance
and victories over the Saxons—Arthlaf 514
EGBERT, who reduced the heptarchy, and was first
crowned sole monarch of England—Egbekek . 828
ALFREd, who founded the university of Oxford-
Alfrékpe
Cante the Dane—Canbau
Edward the Confessor—Confésfe 1042
William the Conqueror-Wil-consau . Oct. 14. 1066
William Rufus—Rufkoi Sept. 9 . 1087
Henry I.—Henrag Aug. 2 . 1100
STEPHen—Stephbil
Henry the Second—Hen-sécbuf . Oct. 25 . 1154
Richard I.—Richein July 6 . 1189 J-ohn—Jann
J-ohn—Jann
Henry the Third—He-thdas Oct. 19. 1216
HEnry the Third—He-thdas Oct. 19 . 1216 EDward I.—Eddoid
Edvardus Secundus—Ed-setyp July 7 . 1307
EDvardus Tertius—Ed-tertes Jan. 25 . 1326 Richardus Secundus—Ri-setóip June 21 1377
Henry the Fourth—He-fotoun
Henry the Fourth-He-fotoun Sept. 20 1399

		Anno Domini.
Henry the Fifth—He-fisád		. Mar. 20 1412
HENry the Sixth-Hén-sifed		. Aug. 31 1422
EDwardus QUARtus-Ed-quarfauz		. Mar. 4 . 1460
E-dward the Fifth) DC D-14		§ April 9. 1483
E-dward the Fifth R-ichard III }—E-fi-Rokt	٠	June 22 1483
Henricus Septimus-Hen-sépfeil		. Aug. 22 1485
Henricus Octavus-Hen-oclyn .		. April 22 1509
EDwardus Sextus-Ed-sexlos	٠	. Jan. 28. 1546
Mary-Marylut		. July 6 . 1553
ELizabeth—Elzluk		. Nov. 17. 1558
James I.—Jamsyd	,	. Mar. 24 1602
		. Mar. 27 1625
CARolus Secundus - Car-secsok .		. Jan. 30 . 1648
James II.—Jamseif		. Feb. 6 . 1684
WILliam and Mary-Wilseik		. Feb. 13. 1688
Anne-Anpyb		. Mar. 8 . 1701
George I.—Gëopbo		. Aug. 1 . 1714
George II.—Gëo-sepdoi		. June 11 1727
George III.—Gëo-thpanz		. Oct. 25 . 1760
George IV.—Gëo-quarkez		. Jan. 29 . 1820
GEOIGE IV. CO quarton		

Casibelud, Bóadaup, Vortigfos, Hengful & Arthlaf, Egbekek, Alfrékpe, Canbau, Confésfe.

Wil-consau, Rufkoi, Henrag, —
Stephbil & Hen-sécbuf, Ricbein, Jann, He-thdas & Eddoid, Ed-setyp, Ed-tertes, Ri-setôip, He-fotoun, He-fifádque, Hén-sifed, Ed quarfauz, E-fi Rokt, Hen-sépfeil, Hen-oclyn, Ed-sexlos, Marylut, Elzluk, Jamsyd, Caro-primsel, Car-secsok, Jamseif, Wilseik, Anpyb, Gëopbo—pdoi—pauz—kez.

N. B. After Canute inclusive, one thousand is to be added to each. It was thought unnecessary to express it, it being a thing in which it is impossible that any one should mistake.

If it be desired to remember in what month, and day of the month, each king began his reign, it may be done

by the following lines:

Wil-tbó-sou-fat, Steph-de, Jam-chef-fau, Ri-ls-jeb-ed, El-nap,

Hen-gé-tel-an-sez-chez-gib-ged-ped, Geor-ga-jab, An-chei,

Car-chep-riz, Ma-ls, Jo-ps, Ed-nás-loi-rél-cho-pou-rekque.

EXPLANATION.

The *italic* letters represent the day of the month; the letter immediately preceding represents the month itself, r standing for January, f for February, ch for March, p for April, m for May, j for June, l for July, g for August, s for September, t for October, n for November, and d for December.

Thus Steph-de, Steph King Stephen, de Dec. 2. El-nap, El Elizabeth, nap Nov. 17. In words of three or more syllables, the first syllable stands for all the kings of the same name, and the following syllables in order to answer to the first, second, third, &c. of that name. So Jamchef-fau; Jam denotes James I. & II., chef (viz. March 24) belongs to James I., and fau (viz. Feb. 6) to James II. So Ri-ls-jeb-ed; Ri denotes all the Richards, ls (viz. July 6) belongs to Richard 1., jeb (viz. June 21) to Richard 11., and ed (viz. 22 of the same month) to Richard 111.

If this be thought either too difficult or too minute, the reader may pass it over.

TABLE VI.

CHRONOLOGICAL MISCELLANIES SINCE THE CONQUEST.

Wat Tyler's rebellion suppressed—Tylika 1381 Jack Cade's rebellion suppressed—Cadefly 1450 Martin Luther began to preach in Germany against indulgences, and other errors of the Church of
Jack Cade's rebellion suppressed—Cadefly 1450 Martin Luther began to preach in Germany against indulgences, and other errors of the Church of
MARtin LUTHer began to preach in Germany against indulgences, and other errors of the Church of
indulgences, and other errors of the Church of
Rome—Mar-Luth lap
The name of Protestants first began on occasion
of the protestation the Lutherans made against
the decree of the chamber of Spire against them
—Protalen
The SMALCALdan league, or agreement made be-
tween the Protestants of Germany for their mutual
defence at Smalcald—Smalcalloz
The Council of TRENt began DEC. 13—Tren-decat-
alfu
The Massacre of Protestants at Paris - Mas-
Paraloid
Paraloid
William, Prince of Orange, throw off the Spanish
yoke—Un-Ploin
The Spanish Invasion—Sp-invukk 1588
The Gunpowder treason—Powdsyl 1605
The famous rebellion at Naples, on occasion of
the grievous excises, headed by MASANIELlo-
Masanielsop
Oliver Cromwell usurped the government of Eng-
land, under the name of Protector—Cromsli 1653
The island of Jamaica in America taken by the
English—Jamaicaull
Cromwelli Mors—Crom-morsuk 1658
GIBRAltar taken (capta) by the English—Gibrapzo 1704
The Memorial Lines.
God-Bulnou, Inquisded, Charteel, Tylika, Cadefly,
Mar-Luthlap, Protalen, Smalcalloz, Tren-decat-alfu,
Mas-Paraloid, Un-Ploin, Sp-invukk, Powdsyl, Masa-

nielsop, Cromsli, Jamaicaull, Crom-morsuk, capta Gibrapzo.

N. B. A thousand is to be added as above, where it is not expressed.

TABLE VII.

THE PATRIARCHS BEFORE AND AFTER THE FLOOD.

•				
				An Mun. Age.
ADam—Adniz				. 1 - 930
SETH-Setháty-nad				. 130 — 912
Enos-Endit-nyl				235 - 905
CAInan-Caitel-naz				. 325 — 910
MAHALAleel - Mahalatou	l-kou l			. 395 — 895
JARed-Jarósy-naud				. 460 — 962
ENOCH—Enchséd-isu .		٠		. 622 — 365
METHUselah-Methuseip-	naun			. 687 — 969
Lamech—Lakoif poip .		٠		. 874 — 777
Noah-Noachazús-nuz				. 1056 — 950
SHEM—Shembulk-ang.				. 1558 — 600
ARphaxad—Araslei-fik		•	•	. 1658 — 438
SALah-Salasout-ott .				. 1693 — 433
HEBer-Hebaped-óso .		٠		. 1722 — 464
Peleg-Pelapúp-etou .				. 1757 — 239
				. 1787 — 239
SERug-Serakán-diz				. 1819 — 230
NAHOR-Nahorakón-bok				. 1849 — 148
TERah - Terakoik-dyl .				. 1878 — 205
ABraham - Abezyk-boil		٠		. 2008 — 175
Isaac—Isebyk-beiz				. 2108 — 180
JACOB-Jácobebaúk-bop				. 2168 — 147

The Memorial Lines.

Adniz, Setháty-nad, —— —— Endil-nyl, Caitel-naz, Mahalatoul-koul,
Jarósy-naud, —— Enchséd-isu, Methuseíp-naun, Lakoíf-poip, Noachazús-
nuz, Shembulk-aug, Arasleí-fik, Salasout-ott, Hebaped-óso, Pelapúp-etou, Reuapeíp-diu, Serakán-diz, Nahorakón-bok,
Terakoik-dyl, Abezyk-boil, Isebyk-beiz, Jácobebaúk-bop.

TABLE VIII.

THE PATRIARCHS, &c. ACCORDING TO THEIR YEARS BEFORE

					В	ef.	Christ.
SETH-Séthikoif	•				bor	a	3874
Enos s.—Enosipaun .						۰	0100
Cainan s Caitspou .							3679
MAHALAleel s Maha							3609
JARed s Jarilof							3544
ENOCH s Enchtike .							3382
METHUSelah s Meth	usita	p					3317
Lamech s Lamibiz .							3130
Noah s Noenok							2948
SHem s Sheffs							2446
ARPHaxad s Arphet							2346
SALah sSaldibb .							2311
HEBER sHébdeka .							2281
Peleg s.—Pelégedop							2247
Reu sReuedap							2217
SERUG s Serúgdaku							2185
NAHOR S Nahrdall				٠			2155
TERah s.—Terebes .							2126
ABRAham sAbráma							1996
Isaac sIsakous							1896
J-acob s.—Jakip							1837
Levi s.—Levapus							1756
4							

The reader is desired to take notice, that in this and the following tables, (where it could be done consistently with the intended brevity,) the relation which every person bore to him who immediately goes before, is signified by a single letter; s standing for son or sister, b for brother, n for nephew or niece, u for uncle, g for grandson, m for mother. So the s after Enos shows that he was the son of Seth, and so on.

Séthikoif, —— Enosipaun, Caitspou, Mahalatsyn, Jarilof, Enchtike, Methusitap, Lamibiz, Nocnok, Sheffs, Arphetos, Saldibb, Hébdeka, Pelégedop, Reúcdap, Serúgdaku, Nahrdall, Terebes, Abrámanous, Isakous, Jakip, Levapusque.

TABLE IX.

THE JUDGES OF ISRAEL, FROM THE DEATH OF MOSES TO SAMUEL.

									I	Bef. Christ.
Moses M-oritur (dies)-	-M	0S-1	nol	α					. 1451
Joshua—Jóshfol .						٠				. 1445
OTHoniel—Othózu										. 1405
Enud-Enutel										. 1325
DeBorah—Debodeil										. 1285
Gideon-Gidol										. 1245
Apimelech—Abmets										. 1236
Thola—Thlett										. 1233
JAIr-Jaïdaz			ı,							. 1210
JEPHTha—Jephtakk										. 1188
IBzan-Ibzáke			١.						٠	. 1182
ELOn-Eloboil			٠,					٠		. 1175
ABDON-Abdonaso				4			٠			. 1164
Eli-Elíbuρ	٠	٠	١.				٠			. 1157
Samuel-Sambap .										. 1117
1										

The Memorial Lines.

Mos-mola, Jóshfol, Othózu, Ehutel, Debodeil, Gidol, Abmets,

Thlett, Jaïdaz, Jephtakk, Ibzáke, Eloboil & Elíbup, Abdonaso, Sambap, —

N. B. One thousand is to be added. The dates affixed to the Judges before Abimelech are supposed to relate, not to the beginning of their presiding over Israel, but to the end of the rest given by them.—Vide the preface to Petavii Rationarium.

TABLE X.

KINGS OF ISRAEL AND JUDAII.

	KINGS	OF A	LL I	SRA	EL.						
									В	ef. C	hrist.
SAUL-Saulaznu					•					.]	095
David—Davazul		•								.]	1055
David—Davazul Solomon s.—Solo	mázal	!								.]	015
The Defection											
The Defection	OI CIII		CII		DCS		•	•	•	•	310
	KING	GS O	FJU	DAI	ī.						
Rенoboam s.—R	ehono	il									975
ABIjam s.—Abinu	p										957
Asa s.—Asanul	1 .										955
Abijam s.—Abinu Asa s.—Asanul Jehosaphat s.—	hosa	iph:	anb	0							914
Јеноват s.—h	orkein	· [· · ·									889
AHAZIAh sAha	zikku										885
ATHALIAh m.—A	${ m thli}_{kk}$,									884
Jehoram s.—h Ahaziah s.— Aha Athaziah m.— Ah Jehorash g.— Amaziah s.— Ama Uzziah or Azariah	hoaas	hko	ik								878
Amaziah s.—Ama	azkin										839
Uzziah or Azaria	h s	-U:	z- A	zai	ikl	11					810
JOTHAM S.—Jothp AHAZ S.—Aházpo HEZEKiah S.—He MANASSEH S.—Ma AMON S.—Amóns	nık .					J					758
AHAZ s.—Aházno	d .										742
Hezekiah sHe	zenen										727
Manasseh s.—Ma	nsóut		Ĭ								693
AMON s.—Amóns	ot .		Ċ		Ċ	Ċ			i	Ĭ.	643
Josiah s.—Josiaso	2 .	i						Ĭ			640
Jeholakim s.— -	-hoial	im.	ง ราก	•							609
Jehoiakim s.— - Jehoiakin s.— Zedekiah u.—Ze	-hoiak	ano	ogre i	•	•	•	•	•	•	•	600
ZEDEKIAH U -Ze	dekib	uug roi	•	•	•	•	•		•	•	598
JDD Elitar u, - 20						•	•	•	•	•	000
	KIN	GS O	F IS	RAE	L.						
JEROBoam son of	Nebat	, J	Jero	bn	oil						975
N-adab s Nnuf											954
BAAsha—Baanut											953
Elah sElniz											930
BAAsha—Baanut ELah s.—Elniz ZIMri, TIBni, and	Omri	7	Zim	-Ti	bno	n					929
,											

					В	ef. C	Christ.
Omri alone—Omnel			•				925
AHAB s.—Ahábnak				•			918
AHAZIAh-Ahazikoup .							897
Joram bJorknau							896
JEHU-Jehukko							884
JEHOAHAZ s Jehoahaklan	l						856
Jеноаsн s.—hoashkin							839
JERoboam II. sJeroseko	lu						825
ZACHARIAh s Zacharapp	t						773
SHALLUM s. of Jabesh-Sh	all	upp	e			٠	772
MENAhem s. of Gadi-Me.							772
PEKAIah s Pekaipsa .	- 4	•					761
Pekah-Pekapun							759
Hosea s. of Elah-Hospiz							730
, 1							

Saulaznu, Davazul, Solomázal, Reho-Jerobnoil.

Abínup, Asanul, --hosaphanbo, --horkein, Ahazikku, Athlikko, --hoaashkoik, Amazkin, Uz-Azarikby, Jothpuk & Aházpod, Hezepep, Mansóut & Amónsot, Josiasoz, --hoiakimsyn, --hoiakaug, Zedekilnei.

Nnuf, Baanut, Elniz, Zim-Tibnen, Omnel, Ahábnak, Ahazikoup, Jorknau, Jehukko, Jehoahaklau, --hoashkin, Jerosekdu, Zacharappt, Shalluppe, Menappe, Pekaipsa, Pekapun, Hospiz. —

N. B. 'The break before some of the words denotes that Je is wanting, as --hosaphanbo for Jehosaphanbo, --horkein for Jehorkein, &c.

TABLE XI.

THE PROPHETS.

		Bet.	Christ.
Jonas prophesied against Ninevel-Jonkze			802
Joel prophesied—Joeig	٠		800

Bef. Christ.

Amos prophesied against King Jeroboam—Ampeip	787
Hosea prophesied against Israel—Hosephu	785
Isaiah began to prophesy—Ispauz	760
NAHum prophesied against Nineveh—Náhupuk .	758
Micah prophesied against Judah and Jerusalem—	
Micant	753
Micput	631
ZEPHaniah prophesied—Zephautz	630
HABAkkuk prophesied—Habasyn	609
Ezekiel in captivity had his first vision—Ezeloul .	595
Obadiah prophesied against the Edomites—Oba-	
dilkoi	587
dilkoi	555
Haggai prophesied—Haglez	520
HAGgai prophesied—Haglez ZECHARiah prophesied—Zecharúdz	520
MALACHI wrote his book, which was the end of	
vision and prophecy-Malachinp	397
1 1 0	
The Memorial Lines.	
Jonkze, Joeig, Ampeip, Hosepku, Ispauz, Náhupuk Micput, Jersta, Zephautz, Habasyn, Ezeloul, Obad Dull. Haglez, Zecharúdz, Malachinp.	ilkoi,
TABLE XII.	
KINGS OF ASSYRIA AND BABYLON.	
KINGS OF ASSYRIA AFTER THE DISSOLUTION OF THE ANCIENT ASS EMPIRE UPON THE DEATH OF SARDANAPALUS.	YRIAN Christ.
· ·	747
ARBACES—Arbapop	
Sennacherib s.—Sennachoibo	714
Esarhadon third s.—Esarhadopzau	706
ESAKRADUOR timu 3.—Asarradopeate	, 30
KINGS OF BABYLON.	
Belesis-Belespop	747
Na pius - Nadnif	mro. 4

					В	ef. C	Christ.
CHInzirus.)							
Porus \ - Chi-Po-Jugg	oes					•	726
Jugaus .)							
Mardok Empadus—Empea							721
Arkianus-Arkpyn				•			709
Belibus—Belibupze	•	•	•	4			702
APRONadius-Apronaunn							699
REGIBILIS—Regibsni							693
MESessimordacus—Messoud							692

After his death followed an interregnum of eight years, of which Esarhaddon, King of Assyria, taking the advantage, seized Babylon, and adding it to his former empire, thenceforth reigned over both for thirteen years.

KINGS OF ASSYRIA AND BABYLON JOINTLY, THE ROYAL SEAT SOME-TIMES AT NINEVEH, AND SOMETIMES AT BABYLON.

					1	Bef.	Christ.
Esarliaddon, called in Ptolemy's	s (Can	on	As	SA	R-	
Addinus—Assarsky							680
Saosduchinus s.—Saóssaup .			۰				667
CHYNiladanus-Chynsop						٠	647

Chyniladanus having made himself despicable to his people. Nabopollasar, general of his army, set up for himself; and being a Babylonian by birth, made use of his interest there to seize that part of the Assyrian empire. and reigned king of Babylon twenty-one years. the fourteenth year of his reign, having made an affinity with Astyages, the eldest son of Cyaxares, by the marriage of his son Nebuchadnezzar with Amyitis, the daughter of Astyages, entered into a confederacy with him against the Assyrians, and thereon joining their forces together, they besieged Nineveh; and after having taken the place, and slain Saracus the king, (who was either the successor of Chyniladanus, or he himself under another name,) to gratify the Medes, they utterly destroyed that great and ancient city, and from that time Babylon became the sole metropolis of the Assyrian empire. Vide Prideaux's Connexion, Part I. Book 1.

KINGS OF BA	BYL	on.						
								Christ.
NABOPOLlasar—Nabopolsel					٠			625
Nebrohadnezzar s.—Nebsys								606
Evilmerodoch s.—Evillaub.								561
NERIGlissar b. in law-Nerig	lun			•		٠	٠	5 59
*Laborosoarchod s	. }	_	N	aho	hil			555
Nabonadius s. of Evilmerodo	eh (•		
DARius the MEDE, i.e. Cyaxa	res	, ui	ıcle	e of	. C	yru	s,	
to whom Cyrus allowed the	tit	le c	of a	all	his	CO	n-	
quests as long as he lived—	Dar	-M	ed	lik				538
By his taking Babylon ended	the	e I	3A1	3YI	oni	slı	em	pire,
after it had continued 209	yeai	s—	$-\mathbf{R}$	eg-	Bal	oyl	ezo	ũ.

ASSYRIA.

Arbapop & Salmpek, Senuachoibo, Esarhadopzau.

BARYLON.

Belespop, Nadpif, Chi-Po-Jugpes, Empea, Arkpyn, Belibupze, Apronaunn, Regibsni, Messoud,-Assarsky, Saóssaup, Chynsop,—Nabopolsel, Nebsys, Evillaub, Neriglun, Nabolul, Dar-Medlik, Reg-Babylezou.

TABLE XIII.

KINGS OF EGYPT, MEDIA, AND PERSIA.

		KIN	GS C	F E	GYP	т.†]	Bef.	Christ.
SABACOn	the Æ	thiopiar	1	Sab	aco	pd	oi	٠	•			727
Sevechus	sS	evpan.										719

^{*} For the reason why Laborosoarchod is not named in Ptolemy's Canon, see Prideaux's Connexion, Part I. Book 2. + Of the ancient Kings of Egypt, from Mizraim or Menes, we

have little else but the names, or fabulous accounts.

					f. C	hrist.
TIRHAkah, last of the Æthiopians-	-Tirl	app	$_{l}l$.			705
Confederacy of the 12 PRINCES-P	rin- <i>b</i>	é-s/	ei .			688
Psammitspy						670
NECUS s.—Necussas						616
Psammauq						600
Apries sAprunf						594
Psammis s.—Psammaug Apries s.—Aprunf						569
PSAMMINITUS s. who was conquered	by (Can	ıbv	ses		
son of Cyrus—Psaminitlel						525
zon et egan zamment						
KINGS OF MEDIA AFTER THE REVOLT (F TH	Е М	EDE	S F	ROM	
SENNACHERIB.						
DeJoces—Dejonzou						709
Phraortes s.—Phraslau				•		656
Cyaxares s.—Cyaxasif						634
Astvages s.—Astuno						594
Dejoces—Dejopzou						559
			•			
KINGS OF PERSIA.						
Cyrute Cyrute						536
CYRUS—Cyruts	Ĭ					529
+Oronastes Magus	Mag	. D:	1.r-		7	
Darius s. of Hystaspes Hysta	lda				}	521
XERXes s. by Atossa, daughter of Cy	rus-	_X	ery	oka	J II.	485
Artaxerxes Longimanus third s.—.	Long	fan	f			464
X E Pros II e slain by		y and	,	•	•	101
XERXES II. s. slain by . Sogdianus bast. b. slain by —Xe	rd-S	O0'-	Dai	r_)	
Ochus bastard b. commonly Not	hodi	5.	- C()		}	423
called Darius Nothus.	iout	•	•	•	J	
Caned DARIUS NOTHUS . J						

+ Herodotus calls him Smerdis; Ctesias, Spendadates; Æschylus, Mardus; and in Scripture he is called Antaxerxes.

^{*} Cyaxares succeeded Astyages in the civil government, and Cyrus, grandson of Astyages, by his daughter Mandane, in the military government.

CHRONOLOGICA EI HISTORICA.
Bef. Christ.
Arsaces eldest s. commonly called Artaxerxes
MNemon—Mnoyf 404
Ochus s.—Ochilk
Arses youngest s.—Arstip
Darius Codomannus, descended from Darius No-
thus—Codomattu
The Memorial Lines.
EGYPT.
Sabacopdoi, Sevpan, Tirhapyl, Prin-bé-skei, Psammitspy,
Necussas, Psammaug, Aprunf, Amasláun, Psaminitlel.
MEDIA.
Dejopzou, Phraslau, Cyaxasif, Astuno, Cy-d-lun.
PERSIA.
Cambylen, Oro-Mag-Dar-Hystaldu, Xerxoku, Long-
fauf, Xerd-Sog-Dar-Nothodi, Mnoyf, Ochilk, Arstip, Codo-
mattu.
Interes.
TABLE XIV.
THE DIFFERENT NAMES OF THE SAME PERSONS IN SCRIPTURE
AND IN PROFANE AUTHORS.
What is a second of the second
BELESIS BALAdan, Isa. xxxix. 1.
Mardok Empadus Merodach Baladan, ibid.
(Fearbaddon 2 Kings xix 37.
ASSAT-Additios. ASNAPper Esta iv. 10.
§NABONADius . BELSHazzar, Daniel v. 1 and 29.
CYAxares DARius the M-ede, Daniel iii. 31.
SABacon So, 2 Kings xvii. 4.

^{**} Called also by Castor, Ninus, junior.

+ Also Thilgamus and Thilgath Pilneser.

* Called also by Nicolas Damascenus, Nanibrus.

§ Called also by Berosus, Nabonnedus; by Megasthenes, Nabonnidochus; by Herodotus, Labynetus; and by Josephus, Naboandelus.

NECUS	. Pharaoh Necho, 2 Chro. xxxv. 20.
TARAchus .	. Tirhakah, Isa. xxxvii. 9.
APRies	. Pharaoh Hophrah, Jer. xliv. 30.
Dejoces	. Arphaxad, Judith i. 1.
*ARTaxerxes	:] A
Longimanus	AHASuerus, Esther ii. 16.
Salmaneser	Enemessar, Tobit i. 2. Shalmon, Hosea x. 14.
SENnacherib	. SARGon, Isaiah xx. 1.
Astrages .	. Ahasuerus, Daniel ix. 1.
Sevechus .	. Sethon, Herodotus 2.
Saosduchinus	. +Nabuchodonosor, Judith i. 1.
Cambyses .	. Ahasuerus, Ezra iv. 6.
SMERDIS .	. ARTaxerxes, Ezra iv. 7.

Arb-Tig, Bel-Bala-Nab, Nabonad-Belsh, Dar-M-Cya, Sab-So,

Dej-Arphax, Apr-Hoph, Empád-Balad, Ass-Esar-Asnap, Sen-Sarg, Salm-Ene-Shalm, Sev-Seth, Saós-Nabu, Smerd-Art,

Tirh-Tara, Nech-Necus, Art-Long-Asty-Ahas, Cam-Ahasque.

TABLE XV.

KINGS OF EGYPT AND SYRIA, AFTER THE DEATH OF ALEX-ANDER THE GREAT.

KINGS OF EGYPT.	Bef.	Christ.
Ptolemæus Lagus or Soter-Lagtyo		304
Ptol. Philadelphus s.—Phadko or Phildeif		284
Ptol. Euergetes s.—Eudos		246
PTOL. Philopator s.—Ptol-Pheeb		221
PTOL. EPIPHanes s.—Ptol-Epiphezo		
Ptol. Philometor s.—Phombeiz		

* Archbishop Usher thinks that Darius Hystaspes was the K. Ahasuerus that married Esther; Scaliger, that Xerxes was.

[†] Nabuchodonosor was a name among the Babylonians, commonly given to their kings, as that of Pharaoh was among the Egyptians.

CHRONOLOGICA ET HISTORICA.		27
	Ref. 6	Christ.
Ptol. Physcon b.—Physcobfu		
Ptol. LATHYRUS s.—Lathyradz		120
ALEYANder n — Alexanbu		80
Alexander n.—Alexanhy	•	65
CLEOPATra d.—Cleopatla	•	53
CLEOPATTa d.—Cleopatta	•	or
KINGS OF SYRIA.		
SELeucus Nicanor-Sél-Nitad		312
Antiochus Soter sAnti-Sodoin		279
A-ntiochus Theos s.—A-Thedauz		260
SELeucus Callinicus s.—Sel-Caldfu		245
Seleucus CERAUNUS s.—Cerauneel		225
Seleucus CERAUNus s.—Cerauneel Antiochus Magnus b.—Ant-Magdee		222
SELEUCUS Philopator s.—Sel-Phaks		186
Antiochus E-piphanes b.—An-Eboil		175
Antiochus Eupator s.—Ant-Eupaso		164
Demetrius S-oter s. of Seleucus Philopator—Der	n-	
Såse		162
ALexander Bala—Al-Balbuz	•	150
D-emetrius Nicator son of Demetrius Soter-1	o	100
Nicator Son of Demetricas Cotter -	,	145
Nicafu	•	140
D-emetrius Nicator—D-Nicaty	•	130
7-emetrius Nicator—D-Nicaty	•	125
ZEBina—Zebbel	•	120
Antiochus Grypus son of Demetrius Micator		123
Grypadi	•	
SELEUCus s.—Seleucous	٠	96
PHILIP b.—Philipne	•	92
TIGRANES King of Armenia—Tigraneit	۰	83
The Memorial Lines.		
The Memorial Lines.		
Lagtyo, Phadko, Eudos, Ptol-Pheeb, Ptol-E	pipl	nezo,
Physcobfu, Lathyradz, Alexanky, Aulaul, Cleon	patle	z .
SYRIA.		
Sél-Nitad, Antí-Sodoin, A-Thedauz, Sel-Cala	fu.	Ce-
rauneel,	<i>,</i> ~,	

Ant-Magdee, Sel-Phaks, An-Eboil, Ant-Eúpaso, Dem-Sáse, Al-Balbuz, D-Nicafu, Sidétboz, D-Nicatu, Zebbel,

Al-Balbuz, D-Nicafu, Sidétboz, D-Nicaty, Zebbel, Grypadi, Seleucous, Philipne, Tigráneit.

TABLE XVI.

JEWISH HIGH PRIESTS, &c. AFTER THE RETURN FROM THE

CAPTIVI	TY.							
						3	Bef.	Christ.
Jeshua son of Jozadack-Jes								536
Joiakim s.—Joiakokt				٠				483
Eliashib s.—Elsholt								4.53
Joiadoat								413
*JOHANAN s.—Johanánipt.								373
JADdua-Jadutob	٠							341
Onias Primus sOn-primie	la							321
Simon the J-ust s.—Sim-jig								300
Eleazar b.—Eleádna								291
Manasseh son of Jaddua, and	Lui	ıcle	e of	Si	mo	n ti	ie.	
Just-Manásseps								276
Just—Manásseps †Onias S-ecundus son of Simo	n tl	ie i	Jus	t	On-	-sdi	12	250
SIMON SECUNDUS S Sim-seco	lap							217
Onias T-ertius s.—On-thoul								195
Jason b.—Jasboil								175
Menelaus b.—Menelape .								172
On the death of Menelaus,	A	lei	mus	s wa	as I	mac	!e	
high priest by Antiochus I								
Jonathan, brother of Jud								
priest by Alexander Bala.							7	
Judas MACCABæus (s. of Matta		ıs.d	esc	enc	led	fro	m	
Asmonæus) captain of the J								166
Jonathan bJónabauz .								160
Simon Maccabaus-Si-Mache								143

^{*} Called also Jonathan. Nehemiah x. 11.

⁺ He being an infant at his father's death, Eleazar was made high priest.

											Def	Christ.
Hyrcanus s	_H	ircatu										
17 Anistalia), II	E.	Z .		•	•	•	•	•	•	•	106
K. Aristobu												
Alexander J												
ALEXANDRA	w	-Alxá	ndr	oik								78
(ARISTOBUL	us SE	Cund	us v	ou	nge	r s.	K		Ari	stó	b-	
secaun)												69
HYRCAnus	SECU	N Dus	eld	er	b.	H.	P	. —	- H	yrc	a-	
secundsi										-		63
ANTIGONUS												
gono≈ .												40
HEROD son	of A	otivas	K	—F	l er	odi	k					38
ARCHELaus												3
TINCHELaus	12.—	riche	.16	•	•	•	•	•	•	•	•	

Jeshúalis, Joiakokt, Elsholt, Joiadoat, Johanánipt, Jadutob, On-prímida, Sim-jig, Eleádna, Manásseps, On-sduz, Sim-secdap, On-tboul, Jasboil, Menelápe, Ju-Máccabass, Jónabauz, Si-Macbot, Hyrcatu, K-Arbys, Jannazu, Alxándroik, Aristób-secaun, Hyrca-secundsi, Antigonoz, Herodík, Archelt.——

TABLE XVII.

FOUNDERS, &c. OF ANCIENT MONARCHIES.
Bef. Christ.
Nanus founder of the Assyrian monarchy-Ninezlou 2059
SEMiramis wife of Ninus—Semanaul 1965
SARDANapalus in whom ended the Assyrian mo-
narchy—Sardanpop or paup 747 or 767
ÆGIALEUS, King of Sicyon—Ægialézkou 2089
Inachus first King of Argos—Inakus 1856
The Ogygian flood, under Ogyges King of Attica
—Ogygapaus
Prometheus, son of Japetus, brother of Atlas-
Praskoi
CECrops first King of Athens—Cecblus 1556
SISYPHUS first King of Corinth-Sisyphálzo 1504

	Bef. C	Christ.
TEUCEr first King of Troy—Teuchuzd .	1	502
Cadmus first King of Thebes-Cadmásno .	1	494
SATurn expelled Crete by his son Jupiter, set	tled	
in Italy—Satátty Perseus first King of Mycene—Pérsatat	1	330
Perseus first King of Mycene-Pérsatat .	1	313
HERcules, son of Jupiter by Alcmena-Herb	doif 1	274
The Argonautic expedition-Argóbiaup .	1	267
OEDIpus King of Thebes—Oédibess		266
Theseus son of Ægeus—Thesbdif		234
*Codrus the last King of Athens—Codrázpa		1071
CARANUS first King of Macedon—Carankaf		814
CANDAUles King of Lydia—Candauptu .		735
CRŒsus King of Lydia—Cræsúse		562
Cyrus, founder of the Persian empire—Cyrut		536
Alexander, founder of the Grecian empire—Ale		331
Julius Cæsar, founder of the Roman empire—J		46
o Lius Ciesai, founder of the Roman empire—	1103	40
The Memorial Lines.		
Ninezlou, Semanaut, Sardanpop, Ægialézkou, Inakus, Ogygapaus, Praskoi, Cecblus, Sisyphá Teucbuzd, Cadmáfno, Satátty, Pérsatat, Her- Argóbdaup, Oédibess, Thesbáif, Codrázpa, Ca Candauptu, Cræsúse, Cyruts, Alexita, Julos.	bdoif,	f,
TABLE XVIII.		
GRECIAN HISTORY.		
(D) (D) (1) (1		Christ.
The THEBan war—Thebadel		1225
First Messenian war - Messpot	• •	743
After the death of Codrus the Athenians had per Archons, the first of which was Medon—Meda: Then decennial Archons, the first of which was Co	zoiz .	1070
-Charoppuo		754
Creseiz	E 011	680

	Bef.	Christ.
Second Messenian war—Messku	٠	685
Battle of MARATHON-Marathónz		490
Battle of SALAMis-Salamóky		480
Battle of Eurymedopz		470
The Peloponnesian war—Pelofib		431
Battle of LEUCTRA—Leuctratpi		373
Battle of Mantinea-Mantisi		368
PHOCæan or sacred war—Phocilp	٠	357
Battle of the River GRANIcus-Granitif		334
Battle at the Issus—Isstit		333
Battle of Arbela—Arbtib		331
ALExander the Great succeeds Philip-Alextis		336
Philip Aridæus—Aritet		323
Alexander Ægus—Ægtas		316

Thebadel & Messpot, Messku, Marathónz, Salamóky, Eurymedopz, Pelofib, Leuctratpi, Mantisi, Phocitp, Granitif, Isstit, Arbtib, Alextis, Aritet, Ægtas.

N. B. After the death of Alexander there arose great confusion among his Generals about the succession, each seizing what he could for himself; till, by leaguing and making war against each other, they were, after some years, all destroyed except four. These were Cassander, Lysimachus, Ptolemy, and Seleucus, who divided the whole empire.

Cassander had Macedon and GREece.

Lysimachus had Thrace and those parts of Asia situated upon the Hellespont and the Bosphorus.

PTOLEMY had E-gypt, Libya, A-rabia, PALestine, and Celo-Syria.

SELEUCUS all the rest of Asia, &c.

The Memorial Line.

Cáss-magre, Lys-thrachebos, Ptol-ælibapalsy, Seleuc-as.

TABLE XIX,

GRECIAN LAWGIVERS, PHILOSOPHE	RS,	AND	PO	ETS.	
				Bef.	Christ.
Ly curgus born—Lyenes					926
Draco-Drásdo					624
Solon died-Solun					559
LYTHAGoras died aged 80—Pythágh	us				506
Euclid the geomet. flourished—Eucl	oza	u.			406
Socrates died-Socrina				Ĭ	399
XENOPHon died—Xenophilou .					359
Dr. 44. 1' 1 TO1 4 7					
Diogenes died aged 90-Diotet .					323
Aristotle died aged 63—Aristéd .		• •			$\frac{320}{322}$
EPICUrus died aged 72—Epicudpa				•	
Archimedes slain—Archidad			٠	•	271
Transcolo 1 Transcolo				•	212
LINUS and Orpheus-Linadka		٠.	•	•	1281
Homer died-Homnad					912
ARCHILOCHUS—Archilochuskau .					686
SAPPHo-Sapphsyd					602
ANACreon—Anácloud					592
77 - 1 1 1 1 1 1 1 1 1 1 1					525
PINDar died aged 80-Pindfôz .					440
Sophocles born—Sophoclozoi .					407
THEOCRITUS flourished—Theocreku			•	•	285
Lycophron flourished—Lycophronz			•	•	270

The Memorial Lines.

Lyenes, Drásdo, Solun, Pytháglys, Euclozau, Socrinn, Xenóphilou, Platok, Diotet, Aristéd, Epicudpa, Archidad, Linadka, Homnad & Archilochuskau, Sapphsyd & Anácloud, Æschlel, Pindfóz, Sophoclozoi, Theócreku, Lycophrepz. ——

TABLE XX.

ROMAN HISTORY.

The foundation of Rome was laid in the 3961st year of the Julian Period—Rom-pinsa; anno mundi 3251—Rom-midub; in the year before Christ 753, or as some 752—Romput; upon the 22d day of APRII—Apride; in the 4th year of the 6th Olympiad—fols.

The Regal State under seven kings lasted 245 years—Stat-regdol.

Jana and B]	Bef.	Christ.
Romulus-Romput					753
Numa Pompilius - Numpaf .					714
Tullus Hostilius Hostilspy .					
Ancus Martius-Ancsip					637
Tarquinius PRISCus - Priscsaf				4	614
SERvius Tullius-Servups		٠			576
Tarquinius Superbus - Superlid					532

The Memorial Lines.

Rom-pinsa, Rom-midub, Romput fols Apride, Numpaf, Hostilspy, Ancsip, Priscsaf, Servupsque Superlid.

TABLE XXI.

The Consular State, from Brutus and Collatinus the first consuls, to the period when Julius Cæsar was made perpetual dictator, lasted 464 years—Stat-consularoso.

Surui (000		Bef.	Christ.
Consuls first made—Consulzor	ø		507
First Dictator-Diconoi			497
Creation of the TRIBunes-Tribfoud	٠		492
Creation of the DECEMViri-Decemvoly			450

	Bef.	Christ.
Creation of the Military T-ribunes - Mil-tfoz.		440
INCENDIUM Urbis, or the burning of the city	by	
the Gauls—Incendikk		388
War with the Samnife		342
War with Pyrrhus King of Epirus-Pyrdoin .		279
Eliza Describeration and a second sec	ċ	263
Second Duvis man Bellum—Bel-punesi-)	216
Third Punic war . das-bok		148
The end of the sedition of the GRACCHI-Gr	30-	140
chade	ac-	122
TTI Towns (1.1)	•	
NT the second second	•	109
TO THE TAX	•	113
The social or ITALian war—Italein		89
War begun with MITHRIDATES-Mithridatkou		89
Dictatorship of Sylla-Syl-dicteiz		80
CATILine's conspiracy—Catilaud		62
First Triumvirate—Trun		59
Battle of Pharsalia—Pharsop		47
Battle of Philippi-Bat-philob	Ť	41
Battle of Actium—Acta		31
		UL

Stat-consularoso, Consulzoi, Diconoi, Tribfoud, Decemvoly, Mil-tfoz, Incendikk, Samnife, Pyrdoin, Bel-punesi-das-bok, Gracchade, Jugubzou, Cimbat, Italein, Mithridatkou, Syl-dicteiz, Catiland, Trun, Pharsop, Bat-philob, Acta.

TABLE XXII.

	THE TWELVE CÆSARS.				
_				Bef. (hrist.
Ι.	Julius Cæsar—Julios				46
11.	Augustel				25
			An	no D	omini.
III.	Tiberius step-s.—Tiberbu .				15
IV.	CALIGULA great n.—Caligulik				38

				omini.
V.	CLAudius un.—Claod			42
VI.	NERo step-s.—Nerul			55
	GALBA. Galb-Othosou .			
	VITEllius VESPasian : Vit-Vespoiz			
	TITUS S.—Titpou			
	Domitian b.—Domitka .			

Julios, Augustel, — Tiberbu, Caligulik, Claod, Nerul, Galb-Othosou, Vit-Vespoiz, Titpou, Domitka.

N. B. The reign of Julius Cæsar is here supposed to commence from the death of Pompey, which made way for his absolute power soon after; the reign of Augustus from the full establishment of his authority by the senate and people. Some reckon it as commencing from the death of Anthony; and others, yet sooner, from the death of Julius Cæsar.

TABLE XXIII.

THI	E ROMAN EMPERORS	FRO	M	NER	∇A	TO	JO,	VIA	Ν.	
								An	no D	omini.
	NERVa-Nervous							•		96
XIV.	TRAjan-Trank					٠				98
XV.	ADRIan-Adriba	р								117
XVI.	Antoninus Pius-	-A	ntl	bip	•			4		137
XVII.	Antoninus Phile	osop	hι	ıs s		\mathbf{A} n	t-p	$\mathrm{hi}b$	sa	161
	COMMODUS s									180
XIX.	PERTinax)							
XX.	PERTinax Didius Julianus	•	23	Pert	Jı	ali-	Sar	nt		192
XXI.	Septimius S-everu	ıs .)							
XXII.	Caracalla & Get	a s	s	−Ca	ar-(Gdd	ab			211
XXIII.	Macrinus & D-iad	lum	en	us)	M	ac-	D-]	He-	. 1	217
XXIV.	Heliogabalus .			. \$		daj)-k		. 🐧	218
XXV.	ALexander S-eve	rus-		A1-8	éd	d				222

Anno D	omini.
XXVI. M-aximinus & M-aximus—M-Metu	235
XXVII. Pupienus and B-albinus—Pu-Bdik	238
XXVIII. Gordian—Gordin	239
XXIX. Philip—Pheff	244
XXIX. Philip—Pheff XXX . Decius—Decidon	249
XXXI.*GALlus & Volusian -Gal-Vódla .	251
XXXII. VALERian—Valéreli	253
XXXIII. Gallienns—Galndauz	260
XXXIV.†Flavius Claudius—Clesk	268
XXXV. Aurelian—Aurepz	270
XXXVI. TACITUS—Tacidoil	275
XXXVII. Probus—Probdois	276
XXXVIII. CARus and his sons C-arinus and	
Numerian—Car-C-Nudke	282
XXXIX. Dioclesian & Maximian-Di-Max-	
deif	284
XL. Constantius Chlorus & Galerius-	-01
Chlo-Galtyt	303
VIII to exetenting the Creek Constan	306
XLI. Constantine the Great-Constys.	300
XLII. FILII CONStantini, the three sons of	
Constantine, viz. Constantine, Con-	
stantius, & Constans—Fil-Constip	337
XLIII. Julian, nephew to Constantine the	
Great—Julisa	361
XLIV. Jovian—Jovtauf.	364

• Gallus. Between Gallus and Valerian, some writers rank Æmilian among the number of emperors; but because he was never established in the empire, nor his title generally acknowledged, others more justly place him only among the usurpers.

⁺ FLAVIUS CLAUDIUS. Upon the death of Claudius, Aurelian was unanimously chosen by the army: and at the same time Quintillus, brother to Claudius, was proclaimed emperor in Italy, and his election allowed by the senate; but finding himself unable to support his cause against Aurelian, he despatched himself, by causing his veins to be opened, after a short reign only of seventeen days, before he was rightly settled in his empire or which reason he is here omitted.

[‡] Constantine was saluted Emperor of the West upon the feath of his father Constantins Chlorus; but was not sole monarch till the defeat and death of Licinus, An. Dom. 323—Licinitet. He removed the imperial seat to Byzantium in the year 330—Byzantiz.

Nervous, Trank, Adribap, Antbip, Ant-phibsa, Commódbeiz.

Pert-Juli-Sant, Car-Gdab, Mac-D-Hedap-k, Al-Sédd,

M-Metu, Pu-Bdik,

Gordin, Pheff, Decidon, Gal-Vódla, Valéreli, Galndauz, Clesk, Aurepz, Tacidoil, Probdois, Car-C-Nudke, Di-Maxdeif,

Chlo-Galtyt, Constys, Fil-Constip, Julisa, Jovtauf.

TABLE XXIV.

THE DIVISION OF THE EMPIRE.

EASTERN.	WESTERN.
Valens—Valiso 364	Valentinian—Valti-
THEodosius MAGnus-	nitauf 364
The Magtoin 379	GRAtian-Gratoil 375
ARCadius-Arctoul . 395	Valentinian the S-e-
THEOdosins Junior-	cond—Val-sikt 383
Theo-Júnozei 408	Honorius—Honotni. 393
Marcian-Marcolz . 450	V Alentinian the T-hird
Leo-Léoloi 457	—Va-t $\acute{o}do$ 424
ZENO-Zenofpo 474	Maximus Avitus -
Anastasius — Ana-	Max-Aviful 455 Majorian—Majolp . 457
stafna 491	
Justin-Justlak 518	* * * * *
Justinian-Justinilep 527	Augustulus, in whom
* * * *	ended the western
Phocas—Phocauze . 602	empire — August foil 475
* * * * *	The restoration of the
Leo Isauricus — Le-	western empire by
Ispap 717	CHARLEMagne —
* * * * *	Charlmeig 800
IRENe-Irénpoup 797	* * * *
Basilius Macedo —	OTHOMAGNUS—Oth-
Bas-Macekaup 867	Magnis 936

38 MEMORIA	TECHNICA.
LEO Philosophus— Leo Pheuks 886 * * * * * * A Lexius C-omnenus —Al-Cazka 1081 * * * * M ICHAEl PALæologus —Micha-Palædsa . 1261 * * * * Constantinople taken in time Palæologus the last	# # # # # # # # # # # # # # # # # # #
Constantine u (see page	111)
The Mem	orial Lines.
	EMPERORS.
Léoloi, Zenofpo, Anastafna Justlak, Justinilep, Phocau	toul, Theo-Júnozei, Marcolz, a,———————————————————————————————————
WESTERN	EMPERORS.
Valtinitauf, Gratoil, Val-sa Max-Aviful, Majolp, Charlmeig, Oth-Magnis, He	ikt, Honotni, Va-tódo, — Augustfoil, —n-quarbzup, Ænbale, Frebdap.
a complete table of all the perors. The succession w century; and after that, on were most remarkable: to	
ALARIC, King of the Gotl plunders Rome—Alrobz ATTIla, King of the Hun God, ravages Italy—At	hs, besieges, takes, and 410 s, called the Scourge of $tifla$ 451

	A	ω D	cmini.
	AIII	ע טו	CHIIII.
GENSeric the Vandal sacks Rome—Gensful			455
ODoacer, King of the Heruli, makes himself ma	ste	r	
of Italy, and assumes the name of King-O	doj	98	476
THEODoric, King of the Ostrogoths, drives Odo	ace	er.	
from Rome, and kills him with his own swor	d-	_	
Theódoni			493
Totilas the Ostrogoth takes Rome—Totlop			547
The Memorial Line.			
The Memorial Line.			
All the state of t	m.	. 7	
Alrobz, Attifla, Gensful, Odops, Theódoni,	10	otto	p.
			4

TABLE XXV.

EASTERN GENERAL COUNCILS.											
(See page 5.)											
Place.	Pope.	Emperor.	Heretics. Year.								
		Constantine	ARIUS 325								
2.Constan- } tinople }	Damasus	{ Theodosi- } us Magnus }	{ Macedo- nians } 381								
3. Ephesus	CElestine	THEod. jun.	Nestorians 431								
4. CHAL- Cedon	LEO	Marcian	${ Eutyches \\ & Dio- \\ scorus } 451$								
5.Constan- \tinople	Vigilius	Justinian	O-rigenists 553								
6.C-onstan tinople	Agatho	{ Constantine } Pogonatus}	$\left\{ egin{array}{c} ext{Mono-} \\ ext{thelites} \end{array} ight\} 680$								
	The	Memorial Lines.									

Nic-Sil-Con-Aritel, Co-Da-Thé-Mateib, Eph-Ce-The-Nésfib,

Chál-Le-Mar-Eudíola, Co-Vi-Júst-Olut, C-Ag-Co-Po-Monseiz.

		WESTERN	GENERAL	COUNCI	LS.	A	no Domini.
1.	LATeran ")					(1122
2.	Lateran	9					1139
		>Lat <i>béd</i>	-in-oil-da	l-lap			1175
	Lateran			•			1215
	LATeran						(1517

					no Domini.
1. Lyons \ -Lyodúl-do	; f				§ 1255
Vienna—Vitaa					. 1311
Constance—Constfaf					. 1414
Basil—Basfia					. 1431
FLORENce-Florénfin					. 1439
TRENT-Trenalol					

Latbéd-in-oil-dal-lap, Lyodúl-doif, Vítaa, Constfaf, Basfia, Florénfin, Trenalol.——

N. B. A thousand is to be added. Note also, that the second and third Lateran being in the same century with the first, b is left out, as bed-in-oil, instead of bed-bin-boil; the syllables in order answering to the order of the councils.

COUNCILS NOT ŒCUMENICAL.

		A. D.		A. D.
Ancyra	{ — Anc- }	915	Antioch—Antob .	341
Neocæsarea	(Neotal)	919	Antioch—Antob . SARDica—Sardifp	347
GANGra-G		340	La o Dicea—La ó disa	361

The Memorial Line.

Anc-Neotal, Gangtoz, Antob, Laódisa, Sardifp.

TABLE XXVI.

FATHERS, HERETICS, &c. Flourished A. D. HERMAS PASTOr-Herm-Pastaul 65 Clemens Romanus—Clé-Romaul 65 IGNAtius—Ignabza 101 Polycarp-Polycarázei 108 . 140 Justin Martyr-Jus-Marboz 167 ATHENagoras—Athnapp. 177 CLemens Alexandrinus - Cl-éxane 192 TERTullian — Tertand 192

CHRONOLOGICA	ET	HI	STO	RI	CA.			41
					F	ouris	hed	A. D.
Minutius F-elix—Min-Fdez								220
) Ricen — Oretz								230
Fregory THAUMaturgus-T	hau	mel	f.					254
Cyprian martyred—Cyprell	٤.							258
ACTANTIUS-Lactantut .								303
A R Nobius — Arntut								303
Eusebius Pamphilius-Eu-L	Pan	ıtal						315
ATHAnasius—Athates .								326
Cyril of J-erusalem—Cyr-J	lilz							350
HILARY—Hilarilf								354
EPIPHANIUS—Epiphánisk								368
Ephraim Syrus-Eph-Syru	toiz							370
Basil Magnus-Bas-Magto	iz .							379
GREGORY NAZianzen-Gree	20-1	Vaz	toiz					370
MACARius-Macarint .	- • •			٠				373
AMBROSE—Ambrotno .								374
JEROMe-Jeromtoik								378
Evagrius-Evagteiz					٠	•		380
Rusinus—Rusinz								390
Austin or Augustin-Austi	ns .				٠			396
CHRYSOstom—Chrysotouk								398
Cyril of Alexandria-Cyr	-Al	$ex\hat{c}$	be					412
MINUTIUS F-elix—Min-Fdez Drigen—Oretz Dregory Thaumaturgus—T Cyprian martyred—Cyprell Lactantius—Lactantyt. Arnobius—Arntyt. Arnobius—Arntyt. Eusebius Pamphilius—Eu-l Athanasius—Athates Cyril of J-erusalem—Cyr-J HILARY—Hilarilf EPIPHANIUS—Epiphánisk EPHRAIMS—Epiphánisk EPHRAIMS—Bas-Magto Gregory Nazianzen—Greg Macarius—Macaript. Ambrose—Ambrotpo. Jerome—Jeromtoik Evagrius—Evagteiz Rufins—Rufinz Austin or Augustin—Austi Chrysostom—Chrysotouk Cyril of Alexandria—Cyr								
Philo Judæus—Phil-Jufy Josephus—Joséphaup Aquila—Aquibek Theodotion—Theodótapu Symmachus—Symchézb .				٠	٠	٠		40
Josephus-Joséphaup .				•	٠	٠		67
AQUIla—Aquibek				•	•	٠		128
THEODOTION—Theodótapu					•	•		175
Symmachus - Symchézb.					•	•	•	201
General Control of	ETICS	5.						80
CERINTHUS—Cerintineiz.	•	•		۰	٠	•	•	110
PAPias—Papaaz	•	•		•	•	٠	۰	119
BASILIdes Basilibbe	•	•		•	•	•	•	190
VALENTINIAN—Valentaay	•	•		•	•	•	•	140
MARCian—Marchez		•	• •	•	•	٠	•	170
HERMOGenes—Hermogapy	f	•	• •	•	•	•	•	179
Montanus—Montape .	•	•		•	٠	•	•	251
Devilar Service Devilar			lave	•	•	•	•	260
MANUS SAMOSAUMUS—Par	น-ฮั	11116	uuz	•		•	•	277
CERINTHUS—Cerintheiz. PAPias—Papaaz BASILIdes—Basilibbe VALENTinian—Valentady MARCian—Marcbaz HERMOGENES—Hermogapy MONTANUS—Montâpe NOVatian—Novdua PAUlus SAMOsatanus—Paulas—Manepp		•	• •	•	•	•	•	211

						F	lour	ishe	d A.D
ARIus Aritel (see page 6)									325
ARIUS Aritel (see page 6) Donatus Dónaten Eunomius Eunomitauz									329
Eunomius—Eunomitauz				٠					360
Priscillian—Priscitpa.									371
Pelagiózu .									405
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The Mem									
Herm-Pastaul, Clé-Romau					Pol	voc	rás	voi	
Jus-Marboz, Irasp, Thask,	Δ+1	rgii.	auz nn	u, I	ίοι έν	gue	T	or	tand
Min-Fdez, Oretz, Thaumelf,	C	muj	16	Lac	tor	unc	, L	Δr	ntut,
Eu-Pamtal, Athates, Cyr-J	€ y [i/~	FI	ila	rilf	F	nin	hár	nie.	b
Eph-Syr-Bas-Gregotoiz, Ma	202	, II	Δ	mh	rot	איץ ממ	Lor	om	toil.
Evagteiz, Rufinz, Austins,	Cl	rye	oto	mb	C	oo,	A le	v A	ho
Phil-Jufy, Joséphaup, Aqu									
Cerintheiz, Papaaz, Basilib									
Hermogapy, Montape, Pau							ι, Ν	la	n <i>epp</i> ,
Dónaten, Eunomitauz, Pris									
Celsbuz, Hierocléze, ——	- I	Porj	phe	рy,	\mathbf{Z}_{0}	sfe	l.		
	•								
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LEO M-agnus—Leo-Moff		٠					٠		444
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Zosimus—Zosoap Leo M-agnus—Leo-Moff Gelasius—Gelásone Joan—Joankof									844
URBan VI. CLEment VII. Antipopes	. 1	Trb	(מוה	n.,	atos	in		1377
CLEment VII. S Antipolies			-3-1	Cie	P-0	110	P	٠	1011
L-eo X.—L-az-blat								٠	1513
Gregory XIII.—Grego-l	i-b	űре		•	•	•	•	•	1572
S-extus Quintus-S-Quind									
CLEment VIII.—Cle-k-ald	nud								1592

								B	f. (Christ.
SANCHoniathon-Sancha	bou	t								1193
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Gildusp										567
Bene-Bedsaus										666
ZONARAS—Zonarabbak										1118
GRATian—Gratabla										1151
BAIsamon—Balahouh										1191
Petrus Lowbardus-Lon	oha	1/2								1158
Thomas Aoninas—Thor	m- A	lan	ad:	i					·	1263
Perparah Petrattu		-4"			•	Ĭ.		•	Ť	1335
Prot Groceanh —Pto	i.0	i Tëo	ore	f~	•	•		•	•	140
Conservaciona Conérnio	a for	i t	510	<i>j</i> ~	•	•	•	•	•	1473
Tyona Proba Tyohlos	go		•	•	•	•	•	•	•	1546
Tycho Brahe—Tychblos		•	•	•		•	٠	•	•	1642
GALILEO-Galilasfe .	e Ea	٠	•	۰	•	•	•	•	•	1536
ERASMus obit—Erasmut Robert Stephens obit—	D.	.01	L	•	•	•	•	•		1559
Robert Stephens out-	ιο	-51	ши	•	•	•	•	٠		
TURNebus—Turnlaul. HENry Stephens obit—	TT	• .	•		•	•	•	•	٠	1500
HENry Stephens obit-	He	n-3	tel	sı	•	•	•	•	•	1003
THUANUS Historicus-T	hua	anse	qp	•	•	•	•	•		1617
The M	em	oria	lI	ine	s.					

Libertle, Zosoap, Leo-Moff, Gelásone, Joankof, Urb-s-Cle-p-atoip, L-az-blat, S-Quinaleil, Cle-k-aloud, Grego-bi-bûpe.

Sanchabout, Herodofus, Manetlicky, Hipparbse, Berodsou.

Onkelkoi, Gelaad, Tacitázei, Pausato, Galbot, Laertbop, Prudinp, Eutropfek, Merlopoi, Heschfoun, Procotip. Agathlaup, Gildusp, Bedsaus, Zonarabbak, Gratabla, Balaboub, Lombalk, Thom-Aquadsi, Petrattu, Ptol-Geografz, Tychblos, Copérnicafoit, Galilasfe, Erasmuts, Ro-Stlun, Turnlaul, Hen-Stelsi, Thuansap.

The time when any Author or famous Man flourished may also be known in general, as follows:

VITRUVIUS in the time of . Julius Cæsar. Dionysius Hallcarnassensis, under Augustus. NERO. STRABO. . Tiberius. SILIUS ITALICUS Quintus Curtius. VES Pasian. PLUTarch) . TRAjan. Appian . (. Antoninus P-ius. ARRIAN . Ulpian . . SEverus. Prosper O Rosius . THEOdosius junior. Z-osimus Jornandes. . Justinian.

The Memorial Lines.

Vitruv-Jul, Halic-Aug, Strab-Tib, Sil-Itál-Nero, Curt-Vesp,
Plut-Appi-Tra, Arri-Ant-P, Ulp-Sev, Pros-Oró-Z-Theo, Joru-Just.

TABLE XXVIII.

THE FOUNDERS OF THE STATES OF EUROPE.

	THE EUCHDERS O	THE STRIES OF EUROPE.	
			Domini.
	Bishop of Rome .	St. Peter—Peft	43
	Pope	Hyginus-Hygalo	154
		GALerius-Ori-Galtyt	
first	Emperor of Con-	ARCadius-Const-Arc-	395
e f	STantinople !	toul	
The	Turkish Emperor	OTTOMan — Turk - Ot-	1295
		TOTAL TOTAL OF THE STATE OF THE	1200
	Emperor of the	Julius Cæsar [before	46
	Romans	Christ]-Rom-Jufs	10

	Anno Domini.	
	King of ITALy in the Empire ODoacer—Ital-Odops . 476	
	Emperor of Ger- CHARLEMagne — Ger- Book Charlmeig 800	
ž.	King of France Pharamody } 420	
first	King of Spain . ATHaulphus-Sp Athfaz 410	
The	King of Portugal Alphonsus-Port-Alabin 1139	
=	King of Scotland Fergus [before Christ] 332	
	King of England Egbert-Engkek 828	
	King of Poland. Boleslaus-Pol-Bolath 100%	
	King of Denmark Olaus-Den-Olakzou . 805	
	King of Sweden . B-ero-Swe-Bhib 831	

The Memorial Lines.

Peft, Hygalo, Ori-Galtyt, Const-Arctoul, Turk-Ottomaduei, av.
Rom-Jufs, Ital-Odops, Ger-Charlmeig, Fran-Pharamódy, Sp-Athfaz, Port Alabin, Scot-Fergtid, Pol-Bolath, Engkek, Den-Olakzou, Swe-Bkib.——

TABLE XXIX.

THE TIMES OF THE WRITING OF THE CANONICAL BOOKS OF THE NEW TESTAMENT.

THE MEW I	12 D T 12 DE TO T 0
An. Dom.	
1 THESSAL. 1 —Thes- 1 52	Titus and 7—Ti-
2 Thosas (lot (53)	1 Truethy (Timey 100
1 Peter—Pelf 54	2 Peter 1 -Sec-Pe 1 ca
GAIatians —Ga-	2 1 I Mothy 1 I maup 1
1 & 2 Corinth. \ Co- \ 57	Jude-Judpa 71
R-omans) Rup	Revelations-Revnau . 96
Philippians)-Phi-	John, Gospel & Epistles
CoLossians	-Jonp 97
E-phesians \ E-Ph- \ 62	MATthew-MoborMatfa 41
Puilemon L-1 11-	MARK-Marot 43
James Jase	L-uke—Laub 61
Hebrews-Hebsi 63	Acts-Acst 63

The Memorial Lines.

Thes-le-t, Pelf, Gá-Co-Rup, Phi-Col-E-Ph-Jase, Hebsi, Ti-Timsu,

Sec-Pe-Timaup, Judpa, Revnau, Jonp, Mob, Marot, Laub, Acst.

TABLE XXX.

THE PROVINCIAL AND LEGATINE CONSTITUTIONS, ACCORDING
TO THE ORDER IN WHICH THEY WERE MADE.

				Co	nstit	ution	ies 1	Editæ A.D.
Stephani—Stephede								. 1222
RICARdi-Ricardiz	\$. 1230
EDMUNdi-Edmundis .								. 1236
OTHonis Card. Legati-Oth	dij)						. 1237
Bonifacii—Bonesa	. 1							. 1261
Отновопі Card. Legati—О	the	bd	aul	z				. 1268
J. Peccham apud Reading-					ldo	in		. 1279
Ejusdem, apud LAMBeth-I								. 1281
R. Winchelsey-Winchtyl								. 1305
WALter-Walted								. 1322
SIMON MEPHAM-Si-Mepha	ek							. 1328
J. STRATFORd—Stratfotod								. 1342
S. Islepe—Isleptand								. 1362
S. LANCHam-Langhisp.								. 1367
S. SUDBURY-Sudbutoik	•							. 1378
T. ARUNdel-Arunfyk								. 1408
H. Chichley-Chichfal .								. 1415

The Memorial Lines.

Stephede, Ricardiz, Edmundis, Othdip, Othobdauk, Bonesa, Pec-Readdoin, Winchtyl, Pec-Lambeka, Walted, Si-Mephtek, Stratfotod, Isleptaud, Chichfal, Arunfyk, Sudbutoik, & Langhisp.

GEOGRAPHICA.

SECTION III.

THE APPLICATION OF THIS ART TO GEOGRAPHY.

In the first place are laid down the general divisions of Europe, Asia, Africa, and America; then the particular divisions of the several states of Europe, into their respective governments or provinces. For every division there is one technical line, composed of the first syllable (or sometimes only of the first letters) of the parts or places into which it is subdivided; which syllables or letters are distinguished from the rest, in the tables, by small capitals, or an hyphen following.

It is further to be observed, that the beginning, middle, and ending of the line, answer, in order, to the northern, middle, and sonthern divisions of the kingdoms or countries; so that not only the places themselves, but, in some measure, their situation with respect to each other, may be remembered at the same time. Thus, in the memorial line for France, as it was before the Revolution, Fra=

P Nor-I-Cham; Bret-O-BouL; Guí-La-DaP.

P Nor-1-Cham denotes the four northern governments, viz. P-icardy, Normandy, 1-sle of France, and Champagne.

Bret-O-BouL denotes the four middle governments, viz.

BRETagne, O-rleanois, Bourgogne, and L-ionnois.

Guí-La-DaP denotes the four southern governments viz. Guienne with Gascony, Languedoc, Dauphiny, and Provence.

It will be yet some further help to remember the situation of places, to observe, that in the several divisions I begin at the west, and go the eastward, as far as the limits of the country will allow, in a strait line, unless where the irregularity of the position makes this method inconvenient or impracticable; where that is the case, the reader will supply the defect by his own observation, and by comparing with proper maps.

Observe further, that where the syllables are connected with an hyphen, the countries denoted by them are con-

tiguous from west to east; thus,

Nor-I-Cham shows that the Isle of France joins to Normandy on the east, and Champagne to the Isle of France on the east. Where the syllables or letters denoting two or more countries are joined together without an hypben, there the countries are contiguous from north to south. Thus, Guí-La-Da P shows that Languedoc joins to Guienne on the east, Dauphiny and Provence to Languedoc on the east; and also that Provence is contiguous to and south of Dauphiny. Such syllables as have an hyphen preceding, but are not by it immediately joined to the foregoing syllable, signify that the countries denoted by them lie eastward, but are not contiguous. Thus, Sp-It-Turk shows that Italy is east of Spain, and Turkey east of Italy, but not contiguous.

When the reader is become well acquainted with the general divisions, he may then go on to charge his memory with the chief cities and most remarkable places of every country, their longitude and latitude, the correspondence of ancient and present geography, the geography of the Old and New Testament, the proportions of the states of Europe to Great Britain, the situation of the most noted islands, with other instructive and entertaining particulars in geography; all which he will find himself able to remember with greater ease than he could possibly have supposed before he became acquainted with the memorial lines con-

trived for that purpose.

TABLE I.

THE GENERAL DIVISIONS OF EUROPE, ASIA, AFRICA, AND AMERICA.

I. EUROPE is divided into,

- 1. Northern—containing Norway, S-weden, Russia, D-enmark.
- 2. Middle comprising the Netherlands, Germany, Poland, L-ittle T-artary, France, Switzerland, Hungary, Transilvania, Moldavia, Walachia.

3. Southern - consisting of Spain with Portugal, Italy,

Turkey.

The Memorial Line.

EUR=No-S-Ru D; Né-Ge-Po-LT, Fran-Switz, Hun-Tran-Mo-Wa; Sp -It -Turk.

II. ASIA is divided into,

1. Northern-containing Great Tartary, Georgia.

2. Middle—including Turkey in Asia, Persia, Empire of the Mogul, China.

3. Southern—comprehending ARABia, East Indies.

The Memorial Line.

AS=Ta-Geo; Tur-Pé-Mo-Chin; Arab-Ind. —

III. AFRICA is divided into,

1. Northern—containing Barbary, Bildulgerid, E-gypt.

2. Middle—subdivided into ZAara, N Egroland, G ulnea, N-ubia.

3. Southern—consisting of Congo, Abyssinia, coast of Abex, coast of Cafraria, Monomotapa, Zanguebar, coast of Ajan.

The Memorial Line.

AF=BáBil-E; ZáNeGui-N; Con-Abyss-Abex, Caf-Mono-Zangu-Aj.

IV. AMERICA is divided into,

1. N-orthern—containing New Wales, New Britain, Louisiana, Canada, Mexico, Florida, Carolina, Virginia, M-aryland, P-ennsilvania, New York, New J-ersey, New England, lying from south-west to north-east.

2. S-outhern—including Terra Firma, Peru, country of the Amazons, Brazil, Chili, Paraguay, Terra Ma-

Gellanica.

The Memorial Lines.

N-AM = Wal-Brit, Lóuis-Can, Mex-Flor, Cár-Vi-M, P-YorJ Eng.

-S-AM=Fírm, Per-Amáz Bra, Chi-Par, Mag.

TABLE II.

THE PARTICULAR DIVISIONS OF NORTHERN EUROPE.

I. NORWAY is divided into five parts or governments, viz.

WARDhuys (including F-inmark and Norwegian Lapland), Drontheim, Bergen, Anslo.

II. SWEDEN was divided into four general parts, viz. Swedish Lapland (with B-othnia intermingled), Sweden P-roper, Finland (lately seized by Russia), and Gothland.

III. DENMARK contains

The peninsula of Jutland, Zealand, and the lesser isles.

IV. RUSSIA contains many provinces, the most considerable of which are,

Northern-Lapland, Dwina or Archangel.

Middle—Finland, Esthonia, Livonia, Ingria, Nov-gorod. Moscow.

Western-LITHuania, Polotsk, Mohilev, Ukraine,

Belgorod.

Southern—Budziak Tartary, CRIM Tartary or Taurida, Voronez, Don K-ozacks.

The Memorial Lines for Northern Europe.

NOR=Ward (F-Lap), DroBerAns. SWED=Lá(B), SweP-Fin Goth.

DEN=Jut-Zea. ——

RUSS=Lap-Dwi; FinEst Liv, Ing-Nov-Mose; Lith-Pol-Mo-Ukr-Bel; Bud-Crim-Vor-DonK.

TABLE III.

THE PARTICULAR DIVISIONS OF MIDDLE EUROPE.

I. The NETHERLANDS, or Low Countries, heretofore were generally distinguished into the United or Dutch Netherlands lying to the north, frequently called Holland, and the former Spanish Netherlands to the south, often called Flanders, from the most remarkable province in each.

The United Netherlands, now incorporated with France, formerly were divided into seven provinces, viz. Friesland, Groningen, Overyssel, H-olland, U-trecht, Guelderland

with Zutphen, Z-ealand.

The Spanish Netherlands, now swallowed up by France, were usually divided into these ten provinces, viz. Flanders, B-rabant, (Marquisate of the empire within Brabant, Seignory of Malines within Brabant,) part of G-uelderland, Limburg, Artois, Hainault, Namur, Luxemburg.

The Memorial Line.

HOLL=Fries-GrOv, H-U-Gue-Zu Z; Fla-B (Mar-Ma), GLim Art-Hai Na-Luxem.

II. GERMANY was divided into nine circles:

Three northern—circle of Westphalia, circle of lower Saxony, circle of upper Saxony.

Three middle-circle of lower RHIne, circle of upper

Rhine, circle of FRANconia.

Three southern—circle of Suabia, circle of Bavaria, circle of Austria.

To which may be added, the kingdom of BOHEMIA, distinguished into four general parts, viz. Lusatia, Silesia, Bohemia P-roper, Moravia.

The Memorial Lines.

GERM=We-Sal-up; Rhil-u-Fran; Sua-Bav-Aus. BOHE=Lusa-Si-BoP·Mor.

III. POLAND was divided into two general parts; the duchy of Lithuania, and the kingdom of Poland, properly so called.

Lithuania, consisting of the duchy of Courland, SA-

mogitia, Lithuania Proper.

The kingdom of Poland contained PRUSSia, POLACHIA, MAZOVIA, POLAND magna, Poland parva, Little RUSSIA, VOLHINIA, PODOLIA.

The Memorial Line.

POL=CouSa-Lith, Pru-Polach, Maz, Polma-pa, Rus-VolhiPodol.

IV. FRANCE was divided into twelve governments, now, including the conquered countries, into about 120 departments:

Four northern—P-icardy, Normandy, I-sle of France, Champagne.

Four middle-Bretagne, O-rleannois, Bourgogne,

L-ionnois.

Four southern—Guienne with Gascony, Languedoc, Dauphiny, P-rovence.

To which may be added, the other countries comprehended within the compass of Old Gaul, viz.

Lorrain, east of Champagne.

Savoy, east of Bourgogne, or Burgundy, and Dauphiny. Switzerland, east of Franché C-ompté.

Franché Compté, east of B-urgundy.

The Memorial Lines.

FRA=P Nor-I-Cham; Brét-O-BouL; Guí-La-DaP. LorCh, Sav BuDa, SwiC, CoB.

TABLE IV.

THE PARTICULAR DIVISIONS OF SOUTHERN EUROPE.

I. SPAIN (excluding Portugal) may be divided into two general parts:

Northern—containing eight provinces, viz. Gallicia, A-sturia, Biscay, N-avarre, Aragon, Catalonia, Leon, Old (vetus) Castile.

Southern—containing five provinces, viz. New (nova) Castile, Valencia, Andalusia, Murcia, G-ranada.

The Memorial Line.

SPA = Gál-A-Bisc-N-Ara-Cat, Lé-Casvet; Casno-Val, And-MurG.

II. ITALY might formerly be distinguished into

Northern, or Lombardy—containing Piedmont, Montserrat, Milan, G-enoa, Venice, Mantua, Parma, Mirandola, Modena.

Southern-Lucca, Tuscany or Etruria, the PAPacy

or States of the Church, NAPles.

The Memorial Line.

IT=Lom (=Pi-Mont-MilG, VenManPa-Mi-Mód), Lu-Tu, Pap-Nap.

III. TURKEY in EUROPE may be distinguished into

Northern—containing Bessarabia, Croatia, D-almatia, Bosnia, Servia, Bulgaria.

Southern—containing Albania, Macedonia, Romania, Chimera, Janna, Livadia, Morea.

The Memorial Line.

TURK = Bess, CroD-Bó-Se-Bulg; Alb-Mac-Rom, Chim-Ja, LivadMor.

The Memorial Lines for all Europe.

NOR=Ward (F-Lap), DroBerAns. SWED=Lá (B), SweP-Fin Goth.

DEN=Jut-Zea. —

RUSS = Lap-Dwi; FinEst Liv, Ing-Nov-Mosc; Lith-Pol-Mo-Ukr-Bel; Bud-Crim-Vor-DonK.

HOLL=Fries-GrOv, H-U-Gue-Zu Z; Fla-B (Mar-Ma), GLim Art-Hai-Na-Luxem.

GERM=We-Sal-up; Rhil-u-Fran; Sua-Bav-Aus.

BOHE=Lusa-Si-BoP-Mor.

POL=CouSa-Lith, Pru-Polach, Maz, Polma-pa, Rus-VolhiPodol.

FRA=P Nor-I-Cham; Brét-O-BouL; Guí-La-DaP. Lor Ch, Sav Bu Da, Swi C, Co B.

SPA=Gál-A-Bisc-N-Ara-Cat, Lé-Casvet; Casno-Val, And-MurG.

IT=Lom (=Pi-Mont-MilG,VenManPa-Mi-Mód), Lu-Tu, Pap-Nap.

TURK = Bess, CroD-B6-Se-Bulg; Alb-Mac-Rom, Chim-Ja, LivadMor.

TABLE V.

ENGLAND, WALES, IRELAND, AND SCOTLAND.

 ENGLAND may be divided into three general parts, northern, middle, and southern; which altogether contain forty counties or shires.

The northern part of England contains six counties or shires:

On the west coast, from north to south,

Cumberland
Westmoreland
Lancashire
[Cum-WeLa]

On the cast coast, from north to south,

Northumberland

Durham

Yorkshire

[NorDurYor]

The middle part of England contains twenty-four counties or shires:

On the west, joining to north to south		ast coast, from north to south,
CHEshire . Shropshire .	Linco	
Herefordshire .	· · · · { N-orf S-uffo	
Monmouthshire.	Essex	2
[CheShHeMon]]	[Li NSEss]
Between Lincolnsh. E. & Cheshire & Shropshire W.	Between Norfolk& Suffolk E. and Herefordshire W.	Between Essex E. and Monmouthshire W.
Derbyshire 1	Worcestershire	GLoucestershire
Derbyshire Notting- N.	Warwickshire	O-xfordshire
hamshire	Northamptonshire	Buckinghamshire
STAFfordshire	B-edfordshire	HERtfordshire
Leicestershire	Huntingdonshire	M-iddlesex
R-utlandshire	C-ambridgeshire	
[De-No-Staf-	[Wor-Wá-No-	[GI-O-Buc-
Lei-R]	B-Hun-C]	HerM]

The southern part of England contains ten counties or shires:

Between the Channel & the Severn sea | Between the Channel and the Thames. Dev-So Do Berkshire Hampshire Surrey S-ussex WILTshire Cornwall DEvonshire Somersetshire Dorsetshire KENL

The Memorial Lines.

E=Cum-WeLa, NorDurYor, CheShHeMon, Li NSEss, De-No Staf-Lei-R,

Wor-Wá-No-B-Hun-C, Gl O-Buc-HerM, Corn-Dév-SoDo, Wilt-BerHa-SurS-Ken.

The division of England according to the Circuits:

WESTERN. Ber-O-Glouce-Mon, Wor-Cor-Dé-Dor-Ham, Som-Wilt. cest-Here-Shrop Staff.

Hert-Ess-Ken-Sur-Sus.

North-Rut-Linc, Derby-No-Leice-War.

Nórf-Su-Cam, Hun-Béd-Buck. Yor-Dur-Nor, Lánca-We-Cumber.

II. WALES is divided into two general parts:

North Wales—containing Anglesey, Caernarvonshire, Denbighshire, Flintshire, Mertonethshire, Montgomeryshire.

South Wales—containing Cardiganshire, Radnorshire, Pembrokeshire, Carmarthenshire, Brecknock-

shire, GLAMorganshire.

The Memorial Line.

W = Ang-Cá-De-Fli-Ch, Meri-Mont-Sh; Card-Radn-Here, Pem-Ca-BreGlam-Mon.

N. B. The *italic* letters denote the adjoining counties of England: as Ch Cheshire, adjoining to Flintshire; Sh Shropshire, adjoining to Montgomeryshire; Here Herefordshire; Mon Monmouthshire.

III. SCOTLAND is divided into two general parts:

North Scotland, or Highlands, beyond the river Tay—containing thirteen counties, among which are Strathnavern, Caithness, Sutherland, Ross, Lochabar, Murray, Braidalbin, P-erth.

South Scotland, on this side the Tay—containing twenty counties, some of which are Argyle, Fife, Lothian,

Aire, Galloway.

The Memorial Line.

SCOT=Strath-Caith, SúthRoss, Loch -Mur, BraiP; Arg -Fi, Lo-Air, Gal.

IV. IRELAND is divided into four larger parts or provinces:

ULSTER to the north MUNSTER to the south

LEINster to the east Connaught to the west

The Memorial Line.

IREL=Ulst, Léin-Con, Munst.

TABLE VI.

CHIEF CITIES AND REMARKABLE PLACES.

IN ANCIENT FRANCE.

A Miens ch. town in Picardy | Bourdeaux in Guienne P-aris in the Isle of France Thoulouse in Languedoc Rouen in Normandy GRENoble in Dauphiny DIJON in Burgundy TROYES Aix RENnes in Bretagne Marseilles Poictiers in Orleannois

The Memorial Lines.

AmPica, PIsle, RouNor, Troy-RheiCham, RénBreta. PoictOrl. Bourd Gui, Thou Lang, Gren Dau, Dijón Burg, Aix-Mar & Or Prov.

IN THE NETHERLANDS.

MIDdleburg in Zealand DUNKIRK Douav Deventer in Overussel LEUWARden in Friesland Mons Brussels in Brabant CAMBray Bruges in Flanders Loo in Guelderland CHARLEroy in Namur Antwerp in Brabant

The Memorial Lines.

MidZea, Dev Overyss, Leuwar Fries, Brus Braba, Brug Flan, Charl Nam, Dunk-Doua Fland, Mon-Camb Hain, Loo Guel & AntBrab.

IN GERMANY.

HAMBURG) ch. towns in HANOver & L-ow. Saxony WITtenberg in UP. Saxony Heidelburg) in Lower Cologne Rhine Munich in Bavaria Augsburg in Suabia

FRANCfort in Upper Rhine NuRemburg in Franconia Munster in Westphalia (in Upper STRASbourg CLEVes in Westphalia VIENNa in Austria D 3

The Memorial Lines.

Hamb-Hano Sal, Wit Sup, Hei-Col Rhilo, Mun Bavar, Aug Suab,

Franc Rhup, Nur F, Muns West, Stras Rhup, Clev West pha, Vienn Aust.

IN SPAIN.

Bilboa in Biscay Compostella in Gallicia Seville in Andalusia Barcelona in Catalonia Oviedo in Asturia Pampeluna in Navarre Saragossa in Arragon Burgos in Castile vetus Madrid in Castile nova Tortosa in Catalonia

The Memorial Lines.

Bil Bis, Compos Gal, Sev Andal, Bar Catal, Ov Ast, Pampel Nav, Sarag Ar, Burg Cas-vet, Mad Ca-no, Tort Cat.

IN TURKEY IN EUROPE.

Sophia ch. town in Bulgaria
Belgrade in Servia
Serato in Bosnia
Spalatro in Dalmatia
Salonichi in Macedonia
Carlstat in Croatia

TERGOVISK IN Walachia
HERMAN- in Transylstadt vania
CHOCZIM IN Moldavia
CONSTANTI- in Romania

The Memorial Lines.

Soph Bul, Belg Servi, Serai Bos, Spal Da, Salon Mac, Carls Cro, Terg 6 Walach, Herm Transyl, Choczi Mo, Const Rom.

TABLE VII.

REMARKABLE PLACES (SPARSIM) IN EUROPE.

FONTARAbia in Biscay
RATISbon in Bavaria
PADua in Venice
NIMeguen in Guelderland
OLIVA in Prussia
CONSTANCE in Suabia
AIX-LA-CHA- in Westpelle phalia
MONTPELier in Languedoc

Cassel in Upper Rhine
Archangel in Dwina
Hochstet
Blenheim
St. Omers in Artois
Verden
Bremen
Magdeburg in Lo. Saxony
Calais in Picardy
Baden in Suabia

Benevento in Naples Breda in Brabant Capiz in Andalusia AGINCOURT IN Artois MITTAW in Covrland Malaga in Granada TRIEFS in L-ower Rhine MAESTrich in Limburg HAVREin Normandy De-Grace VALEDOLID in Old Castile To Ledo in New Castile MEAUX in Champagne Soissons in Isle of France Avignon in Provence NASSaw in Upper Rhine CITADELla in Minorca Cagliari in Sardinia PALERMO in Sicily Stesiwek in Jutland Bastia in Corsica CRACOW in Poland P-arva WARSaw in Mazovia Bergen in Norway Copenhagen in Zealand NISMes in Languedoc Christiana in Aggerhuys TURIN in Piedmont RIGA in Livonia Rochelle in Orleannois Gottenburg in Gothland Lunden in Sconen Cressy in Picardy SALAMANCA in Leon ZELL in Lower Saxony CHAMberry in Savoy DANTZIC in Poland STOCKHOLM in Sweden PRESburg in Up. Hungary Istria | territories

Cordova in Andalusia Carthagena in Murcia (in Franché Besançon LIEGE in Westphalia CREMONA in Milan in the PEnin-Ватсніserai sula of Little Tartary Nancy in Lorrain LEGhorn in Tuscany FLORence GENeva in Switzerland Lisbon in Portugal Ragusa in Dalmatia Breslaw in Silesia Prague in Bohemia Stetin in Pomerania Perpignan in Rousillon TRENT in Tyrol STRASBurg in Alsace Pola in Istria Posega in Sclavonia Peterwa-RAdin Berlin in Brandenburg Dresden in Saxony LEIPsic Ravenna in Romagna LORETTO in Ancona

part of Cuta-Rousillon lonia Sclavonia of Hungary Tyrol of Austria Pomerania Brandenturg Saxony and f of the late Venetian

BERRY of Orleannois part of the Papacy or A NCona states of the Holsrein { part of Lower Saxony Roмagna LIMOsin part of Guienne Capitanate part of Naples

The Memorial Lines.

Fontára Bisc. Rati Bav, Pad Ven, Nim Guélder, Oliv Prus, ConstSuab, Aix-la-Cha West, Montpel Lang, Cass Rhup & Arch Dwin.

Hoch-Blenhe Bav, Omer Art, Verd Brem Salo, Magd Sa-

lo, Cal Pic,

Bad Suab, Benven Nap, Bred Brab, Cad Andal, Aginc Art, MitCourland, MalaGran, TrieRhil, MaestLimbur, Havred Norm.

Valedol OC, Tol New C, Meaux Cham, Soiss Isle & Avig Prov, Nass Rhup, Citadel Min, Cag Sard, Paler Sici, Sles Jut,

Bast Corsic, Craco Polp, Wars Mazov, Berge No, Cop Zeul Nism Langued, Christ Agg, Turin Pied, Riga Li, Roch Ort, GoG. LundScon, CressPic, SalamancLe, ZellSalo, Cham Sav.

Dantzic Pol, Stock Swcp, Prés-up Hung, Cord Andalu

Cart Mur,

Bes Fran-Com, Liege West, Crem Mil, Batch Tarta-pe, Nan Lor,

Leg-Flor Tusc, Gen Switz, LisP, Rag Dal, Bres Sile,

Prag Bo.

Stet Pomeran, Perp Rons, Tren Tyr, Strash Alsa, Pol Istri, Pos-wara Sclav, Berl Bran, Dres-Leip Sax, Rav Ro, Lorett Anc.

Rous Catalon, Sclav Hung, Tyrol Aust, Pom-Brand-Sa Sup, Ist Ven,

Anc-Rom Pap, Limo Guienn, Berr-Anj Orl, Holst Salo. . CapNap.

TABLE VIII.

SOME CHIEF CITIES AND REMARKABLE PLACES IN ASIA, AFRICA, AND AMERICA.

PEKin capital of China CHAMBalu in Tartary AGRa in India Ispahan in Persia

ALEPpo capital of Syria CAIRO in Egypt Fez in Barbary DAAra in Bildulgerid Tombute in Negroland in Æthiopia **Мо**момотора Dangola in Nubia CHAXumo in Æthiopia INF. S. FE in Granada S. Salvador in Brazil S. JAGO in Chili Assumption in Paraguay Quebec in Canada Philadelphia { in Pennsyl- CARamania James Town in Virginia Baltimore in Maryland

Portroseway { in Nova Scotia Astrachan in Tartary Nicosia in Cyprus Mousul } in Diarbec Bagdat } in Natolia Azov in Circassia

NATOlia
SYRIA
Diarbec
TURComania
Mingrelia of Georgia
CARamania
AMASia
NATolia Prop.
ALADulia

Parts of
Turkey
in Asia

for Natolia
largely
taken

The Memorial Lines.

Pek Chín, Agr Ind, Chamb Tart, Isp Pers, Alép Syri, Cair E, Fez Barb, Daa Bildul, Tomb Neg, Monom Æthsupe, Dang-Nub.

Chax Æthinf, Fé Gran, Salv Braz, Jagó Chili, Ass Par, Queb Canadá, Phil Penns, Jam Virgin, Balt Mary, Port-No-Sc.

Astrac Tart, Nico Cyp, Mous-Bag Dia, Smyr Nat, Azov-Circ,

Nat-Syri-Di-Turc Tur, Ming Georg, Car-Amás-Nat-Alád-Nat.

TABLE IX.

LATITUDE AND LONGITUDE OF THE MOST REMARKABLE PLACES.

To the beginning of the name of the place is added a technical ending, consisting of three or four letters, the two first whereof denote the latitude, the other the longitude: thus,

Stocklou-ak, i. e. Stockholm in the 59th degree of

latitude, and 18th of longitude; lou standing for 59, according to the general key, and ak for 18. But this is not the exact longitude and latitude of the place, because no minutes are taken notice of, which would perhaps be a nicety not worth remembering: but that the latitude is between 59 and 60, and the longitude between 18 and 19.* And it is farther to be observed, that if of the two letters which signify the longitude and latitude, the first is a consonant, as in lou, in that case, though the longitude. &c. is between 59 and 60, yet it is nearer to 60 than it is to 59, and consequently 59 degrees 30 minutes at least, if not more. If the first letter is a vowel, as in ak, though it is between 18 and 19, yet it is nearer to the lesser number, and consequently 18 degrees and under a half: as the true longitude of Stockholm is 18 degrees 22 min., the true latitude 59 degrees 30 minutes

	_								
								Lat.	Lon.
+Bergen-Bersy-l .				٠		٠		60	5
STOCKholm-Stocklou	ı-ak		•					59	18
Moscow-Moslu-tei .								55	38
Copenhagen—Coplu-b	e.					٠		55	12
Paris-Parfk-e								48	2
CRACOW-Cracúz-cz.						٠		50	20
Vienna-Viok-ap					٠			48	17
MADRId-Madroy-t .				۰				40	3
Rome-Romfá-be .								41	12
Constantinople—Cond					٠			41	31
PRAGue-Pragly-bo.								50	14
DANTZic-Dantzuf-be	i.				٠	٠		54	18
BASIL-Básilfoi-p .							٠	47	7
BRUssels-Brusly-o .					٠			50	4
+GIBraltar—Gibtan-s								36	6
+Smyrna-Smik-dou .								38	29
Troy-en								40	29
+JERUsalem-Jeruta-t	s.					٠		31	36

^{*} This accuracy hath not been altogether observed in those places which have this mark (+) placed before them; the assigning to them their respective degrees of longitude and latitude being intended only to enable the learner to remember in what part of the globe they are situated.

GEOGRAPHICA.

										Lat.	Lon.
A LEPpo—Alepís-tei				٠						36	38
RHodes-Rhotoi-te										37	32
+Babylon - Babit-fo										33	44
ATHENS-Athik-el										38	-25
IDa-Idil-doi						٠	٠			35	27
WARSaw-Warsúd-										52	21
ALEXandria—Alexib	-if									31	34
S. Helens-Helbu-p							٠			15	7
Lisbon—Listei-bz.									٠	38	10
NAPLES-Naplob-bu									٠	41	-15
Messina-Messik-ba	u									38	16
CARTHage - Cartht	i- b	1	٠							33	10
Nancy-Nanfei-s										48	- 6
Ispahan—Ispte-on										32	49
Agra—Agrék-oit .								٠		28	73
Siam <i>af-ga</i> .										14	100
JAPan—Japio-bay										34	110
Formosa—Formdi-	g									23	100
ASTRachan -Astrop	-la	ш								47	56
Pekin-Pekinoz-bar)									40	117
Fort St. George—G	ëo	bí-	sou							13	69
SPITsbergen-Spitp	i-sc	nl								73	69
ARCHangel - Archső-	fe									64	42
Bengal-Bengdá-oul	!									21	95
VENice—Ventl-ad					•					45	12
CAIRO—Cairdou-il									٠	29	-35
LEIPsic-Leipsub-ad										51	12
HECla-Hecsl-at										65	13
NINeveh-Ninto-fe										34	42
Porto Bello-Bello	á-k	ш								11	85
Porto RICO-Ricéz-	-lou	t						٠		20	59
BERMudas—Bermta	ı-lo	ш								31	59
J-amaica—J <i>ak-ky</i> TERCERA chief of th										18	80
TERCERA chief of th	ie .	Αz	ore	s I	.—'	Te	rcei	ip-	el	37	25
† Madeira Isles—Ma	$\mathrm{d}it$	-ei	l.							33	22
BARbadoes-Barbu-	-la									15	51
BARbadoes—Barbu- FERRO one of the Car	nar	v	Isle	s-	-Fe	rre	k-a	k		28	18
†Quebec—Quop-pu										47	75

N. B. The first meridian is fixed at London.

It may be convenient to remember the exact longitude and latitude of some particular places; as,

•	Lat.	Deg.	Min.	Lor	n. Deg.	Min.
London—Lónla, ib		51	31		0	0
FERRO Isl.—Ferrép, op-ap,						
Oxford—Oxlá, fs-b, al .		51	46		1	15W
Rome—Rómfa, lo-bé, dou		41	51		12	29 E

The Memorial Lines.

Bersy-l, Stocklou-ak, Moslu-tei, Coplu-be, Parfk-e, Cracúz-ez, Viok-ap, Madroy-t, Romfá-be, Conob-ta, Pragly-bo, Dantzuf-bei, Básilfoi-p, Brusly-o, Gibtau-s, Smik-dou, Troy-en, Jeruta-ts, Alepís-tei, Rhotoi-te, Babit-fo,

Athik-el, Idil-doi, Warsúd-eb, Alexib-if, Helbu-p, Listei-bz Naplob-bu, Messik-bau, Carthti-by, Nanfei-s, Ispte-on, Agrék-oit, Siamaf-ya, Japto-bay, Formdi-q, Astrop-lau, Pekinoz-bap, Gëobi-sou, Spitpi-sou, Archsĉ-fe, Bengdá-oul, Venfl-ad, Cairdou-il, Leipsub-ad, Hecsl-at, Ninto-fe, Belbá-ku, Ricéz-lou, Bermta-lou, Jak-ky, Tercerip-cl, Madit-ed, Ferrek-ak, Barbu-la, Quop-pu. Lónla, ib; Ferrép, op-ap, il; Oxlá, fs-b, al; Rómfa, lo-

bé. dou.

TABLE X.

DISTANCE OF CHIEF CITIES, &c. FROM LONDON, IN ENGLISH MILES.

To the beginning of the name of the place there are two or three letters added, which are to be supplied with a cypher at the end; it being thought sufficient to give a round number, instead of being too exact, especially in a matter wherein the best geographers themselves are not agreed: as,

Madreis - Madrid distant from London 86,sc. 860 miles. Copenhagen-Copsa, distant about 61, sc. 610. GENEVA-Genevos; distant 46, sc. 460 miles; and so of the rest, only Paris-Pardel, 225.

Note, That the computations are made at the rate of 69½ statute miles to a degree, which is nearest the truth, and are therefore about one part in seven more than in Mr. Templeman's tables, who computes by geometrical miles of 60 to a degree.

DISTANCES FROM LONDON.

	Eng	. Miles.	Eng. Miles.
Paris-Pardel .		-225	Prague—Praul 650
R-ome-Roul			GIERaltar Gibrabs . 1160
MADRid-Madreis		860	WARSaw-Warsnu . 950
VIENna—Vienke.		820	Stockholm-Stoup . 970
Copenhagen-Cops	sa	610	DANTZIC-Dantziky 800
GENEVa-Genevos		460	Constantinople—
Moscow-Moscass		1660	Constasg 1600

DISTANCES FROM JERUSALEM.

Babylon-Baboky . 480	DAMascus-Dam-	
Nazareth-Nazky . 80	buz	150
Samaria—Samol 45	Antioch—Antig	300
From DAN to BEERsheba-	-Dan-a-Béer <i>do</i> ≈ .	240

The Memorial Lines.

Pardel, Roul, Madreis, Vienke, Copsa, Genevos, Moscass, Praul, Gibrabs, Warsnu, Stoup, Dantziky, Constasg.

Baboky, Nazky, Samol, Dambuz, Antig, - Dan a-Béerdoz.

TABLE XI.

THE PROPORTION OF THE COUNTRIES OF EUROPE TO GREAT BRITAIN, THAT ISLAND BEING THE UNIT.

Russia-Russ-			3 ,39
az,bi	10,13	Turkey—Turt,ak	3,18
GERMany-Germ-		Spain-Spa,ka .	1,81
t,ut	3,53	France—Fra,p.	1,7
Sweden—Swi,ss .	3 ,66	*ITaly—Itb,an .	1,19

[·] With Sicily, Corsica, and Sardinia

*DENMARK—Dén-	!	United Provincest	
mab,on	1,49	—Un-Pr,ab	,11
Portugal—Por,ts.	,36	SWITZERland+-	
Spanish N-ether-		Switzer, boi	
lands†—Span-N,ak	,18	Britain	1,00

The Memorial Lines.

Russaz,bi, Germt,ut, Swi,ss, Polt,in, Fra,p, Spa,ka, Turt,ak,

Por, ts, Span-N, ak, Un-Pr, ab, Switzer, boi, Dénmab, on, Itb. an.

EXPLANATION.

Germt, nt—Germany is to Great Britain as 3,53 to 1, i. e. three times as big and a little above half as big. United Provinces—Un-Pr, ab, as, 11, or very little above a tenth part; and so of the rest.

Note, That a degree is esteemed equal to 60 Geometrical miles, $69\frac{1}{2}$ English statute miles, 15 German miles, 25 common French leagues, 480 Greek STADIA, 16 Persian Parasangs, 12 (or, according to some, 8) Egyptian SCHœni.

The Memorial Line.

Deg = Gëomauz = Gerbu = Frel = Stadoky = Pers-parabáu = Schad.

TABLE XII.

SITUATION OF ISLANDS.

In the Northern Ocean | Britain and Ireland | E. of Jutland—FunZeal-In the Baltic | Minorca | Majorca | Y-vica | MiMajorcy Valenci

^{*} Including Norway and Iceland. + Now in possession of France.

In the Mediterranean $\begin{cases} \text{Corsica} & \cdot \\ \text{Sardinia} & \cdot \\ \text{South of } \textit{Genoa} - \text{CoSard}\textit{Gen} \\ \text{Sicily south of } \textit{Naples} - \text{Sici}\textit{Na} \\ \text{Candia south of the } \textit{Archipelago} - \text{Candia} \\ \textit{Archipel} \\ \text{Corfu west of } \textit{Butrinto} - \text{Corf}\textit{But} \\ \text{Cephalonia } W. \\ \text{Zante } W. \\ \text{Cerigo } S. \\ \text{Negropont east of } \textit{Livadia} - \text{Neg}\textit{Liv} \end{cases}$

The Memorial Lines.

Ice Nor, Fun Zeal Jut, Mi Majorc Y Valenci, Co Sard Gen, Sici Na, Cand Archpel, Corf But, Cepha Zant Ce Mo, Neg Liv.

II. ASIATIC ISLANDS.

[Japan east of North China-Japnor Ch FORMOSA E. of South China-Formósou Chin PHILIPpine Islands east of the Eastern Peninsula-Philipeast Pen Laprone Isl. E. of the Philippines-Lad Phi In the Molucca Islands east of the Eastern Penin-Eastern sula-Molúc P-east Ocean Isles of the Sound south-east of the Eastern P-eninsula—SoundP-east Maldives S.) of the Western Peninsula-CEYlon E. Mal-CéyP-west In the RHODES south of Natolia—RhodCypNatoMediter-Cyprus ranean STALimene In the MEtelin . west of Natolia north to south-Archi-Scio . . StalMeSciSám Nat pelago

The chief of the Molucca Isles are Celebes or Macassar, Gilolo, Ceram, Amboyna.

The chief of the Philippines are Manilla and Min-

Isles of the Sound, the chief are Sumatra, Borneo, and Java.

The Memorial Lines.

Japnor Ch, Formóson Chin, Philipeast Pen, Lad Phi, Molúc P-east,

Sound P-cast, Mal-Céy P-west, Rhod Cyp Nato, Stál Me-Sei Sám Nat.

Mol=Cele-GilCér-Amb, Phil=ManMind, Sound = Suma-BornJay.

III. AFRICAN ISLANDS.

(MADAGASCAR, or the Isle of St. Laurence, E. of In the the south part of Zanguebar-Madgasc Zang Æthi-Zocotra at the east end of the coast of Ajanopic Zoc Ajan Ocean St. HELENS West of Congo-HelCongo In the (Isles of Cape VERD W. of Negroland-Verd Ne Atlan- CANARY Isles west of Bildulgerid- Canár Bild MADEIRa Isles west of Barbary—MadéirBarb Ocean (Azore Isles west of Portugal-AzPort (MALTA south of Sicily-MaltSic PHAROS at the mouth of the port to Alexandria-Phar Alexan

The chief of the CANARY Isles are FERRO OF HIERO, TENERISE, CANARY.

The chief of the Azores, TERCEra.

The chief of the MADEIRA Isles, Porto Santo and Madeira.

The Memorial Lines.

Madgasc Zang, Zoc Ajan, Hel Congo, Verd Ne, Canár Bild, Madéir Barb, Az Port, — Malt Sic, Phar Alexan.

CAN = FerHi-TeneCan. Az = Terce. MADEIRA = PoSanMad.

IV. AMERICAN ISLANDS.

NEWFoundland east of Nova Scotia—NewfNovScot CALIfornia west of New Granada—CaliGran CARIBbee Isles east of the Antilles—CaribAnt

Lucayos Isles east of Florida—LuF

BERMudas, or Sommers' Isles, E. of Carolina—Berm Car Antilles Isles south of Lucayos Isles—AntilLuc

The chief of the Lucayos Islands are Bahama, Lu-

cayone, Providence.

The chief of the Caribbee Islands are Barbadoes, and the Leeward Isles, viz. St. Christopher's, Antigua, Tobago, &c.

The chief of the ANTILLes Islands are Cuba, JAMaica,

Hispaniola, Porto Rico.

The Memorial Lines.

Newf Nov Scot, Cali Gran, Carib Ant, Lu F, Berm Car, Antil Luc.

Luc=Ba-Lu-Prov. CARI=Barb, Chr-Ant-Tob. An-TILL=Cu-Jam-Hisp-Ric.

TABLE XIII..

THE MOST REMARKABLE OF THE LESSER BRITISH ISLANDS.

SHETland In orth of Scotland—Ork-Shetno-Sc
HOLY Island east of Northumberland—Holy North
CANVEY Island near the Sesex—Canv Ess
MEPPEY ISL. Than the Than the Shep-Than Ken
Anglesey west of Caernarvonshire—Ang Caern
MAN west of Lancashire—Man Lan
RAMsey over against St. David's Point in Pembrokeshire—Ram Davi-Pem
Wight (Vectis) south of Hampshire—Vecs-Ham
GUERnsey on the coast of Normandy—Guer-Jerco-Nor
Western Islands (EBudæ) west of Scotland—Ebwe-Sc

The Memorial Lines.

Ork-Shetno-Sc, Holy North, Canv Ess, Shep-Than Ken, & Ang Cacin,

Man Lan. Rum Davi-Pem, Vecs-Ham, Guer-Jerco-Nor, Ebwe-Sc.

TABLE XIV.

ANCIENT EUROPE, ASIA, AND AFRICA.

 Ancient EUROPE, by way of accommodation to the present divisions of it, may be divided into,

1. Northern—containing Scandinavia, Feningia, part of Sarmatia, Cimbrica Chersonesus, Codanonia Insula.

2. Middle—containing Germania, the rest of S-armatia, G-allia Transalpina or Celtogalatia, Rhætia, V-indelicia, Noricum, part of Pannonia, D-acia.

3. Southern—containing Iberia, Italia, the rest of P-annonia, Illyricum, Mosia, G-racia, Thracia.

The Memorial Line.

EUR=Sca-Fe, Sarm, Cimb-Cod; Ger-S, G-Rhæ-V-No-Pa-D; Ib-Ita-PHI-MœG-Th.

II. ASIA Antiqua may be divided into,

1. Northern-containing Scythia Asiatica, Sogdiana,

Colchia, Iberia, Albania.

2. Middle—containing Asia Minor, Armenia, Syria, Mesopotamia, Assyria, Media, Hyrcania, Bactriana, Arachosia, Babylonia, Susiana, Parthia, Aria, Drangiana, Persis, Caramania, Gedrosia, N-orth part of India, Serica, Sinæ.

3. Southern-containing Anabia, the two P-eninsulas

of India.

The Memorial Lines.

AS=ScythiSogd, Col-Ib-Alb; Asm-Arm, Sy-Mes-Ass-Med-Hy-BactArch,

Bab-Sus-Parth-AriDian, Pers-Car -Gedro, NInd-Se-Sin; Ar -P-Ind.

III. AFRICA was anciently divided into,

1. Northern—containing Mauritania, T-ingitania, and Cæsariensis, Numidia, Africa P-ropria, Libya (comprehending Cyrenaica and Marmarica), E-gypt, Gætuli, Garamantes, Nasamones, Psylli.

2. Middle—containing Libya Deserta or Interior, comprehending the Atlantes, Phaurusii, Nigritæ, Nubia,

Жтніоріа.

3. Southern—containing the LUCETHiopes, EREMbi or Troglodytæ, Blemmyes.

The Memorial Lines.

AF=MauT-Cæs-Numid-AfP-Liby-(Cyr-Mar)-E, GætGara-NasPsyl; Libydes = AtlantPhauNig-Nub-Æth; Léucæth-Erem-

Blem.

TABLE XV.

ANCIENT ITALY AND GREECE, ASIA MINOR, SYRIA, AND PALESTINE.

I. Ancient ITALY may be distinguished into two general parts—Gallia Cisalpina to the north, and Italy, primarily so called, to the south.

The several people of Gallia Cisalpina were these:

* LIGURES, TAURINI, SEGUSIANI, SALASSI, LEPONTII, EUGANCI, RHÆTI, CARNI, ISTRI, VENETI; (south of the P-o these) A-nanes, Boii, LINGONES, SENONES; (north of the Po these) LIBICI, LÆVI, INSUBRES, OROBII, CENOMANI.

Italia, primarily so called, or the south parts of Old Italy, comprehending these following countries and people:

†ETRUTIA or Tyrrhenia, Sabini, Latium, Campania, Picentini, G-ræcia Magua, †Umbria, Picenum, V-estini,

^{*} Lying in order along the Alps.

⁺ Lying in order on the Mare Inferum.

† Lying in order on the Mare Superum.

MArucici, Frentani, Apulia, *Marsi, Peligni, Sam-Nium, Hirpini.

The Memorial Lines.

CIS = Lig-Tau-Sé-Sa-Lep-Eug-Rhæt-Car-Is, Vén (P) A-Bo-Ling-Sen;

Lib-Læv-Ins-Oro-Cen. ---

1T = Etru-Sab-Lá-Ca-Pi-G, Um-Pí-V-Ma-Fr-Ap, Mars-PeliSamn-Hirp.

II. Ancient GREECE was usually divided into five general parts, viz. Macedonia, Thessalia, Epirus, Hellas or Græcia, properly so called, and Peloponnesus.

The Memorial Line.

GRÆ=MáTh, Epir-HelPel. -

1. Peloponnesus was divided into six parts or regions, viz. † Achaia, Elis, Messenia, Laconia, Argia or Argolis, † Arcadia.

The Memorial Line.

- Pelop = Ach-Eli-Méss-Lac-Ar-Arcad.

2. Epirus contained these people and countries, viz. Chaones, Dryopes, Thesprotii, Cassiopæi, Amphilochi, Almene, Molossi, Acarnania.

The Memorial Line.

EP = Chao-Dry, Thesprot-Cass-Amphiloc, Al-Mol-Acarnan.

3. Hellas, or Grecia Propria (called also Achaia), was divided into eight parts, viz. Doris, Locris-Epicnemidia, Ætolia, Locris-Ozolwa, Phocis, Bæotia, Megaris, Attica.

The Memorial Line.

GRÆ-PROPRI = Dό-LocrEp, Æto-LocrOz-Pho-Εα-Meg-Att.

* In the inland parts.

In the inland.

⁺ Lying in order on the Ionian, Ægean, and Cretan sea.

4. Thessalia contained these several parts, viz. PE-LASGIOTIS, ESTIOTIS, THESSALIOTIS, PHTHIOTIS, M-agnesia.

The Memorial Line.

THESS = Pelas Est Théss-Phthi-M. -

5. Some of the more remarkable people and countries of Macedonia were, Taulantii, Pæones, Mygdonia, Æmathia, Amphanitis, Pieria.

The Memorial Line.

---- MACE=Taul-Pæo-Mygd-Æmath -AmphPi.

Asia Minor comprehended Asia Propria. BITHYNIA, Pontus, Galatia, *Cappadocia:—Lycia, Pamphylia, Cilicia.

The Memorial Line.

Asm=Asp-Bith-Pó-Ga-Capp: Lyci-Pamphy-Cil. -

Asia Propria contained Phrygia Minor, Mysia Minor, Mysia Major, Æolis, Ionia, Lydia, Phrygia Major, Caria, Doris.

The Memorial Line.

Asp = Phrygimin-Mysimi-m, Æol Ioni-Lyd-Phryma, CarDo.

GALAtia comprehended Pontus GALAticus, PAPHlagonia, GALAtia Propria, Isauria, and part of PIsidia; the other part of which, with the regions of Carbalia, was contained in Pamphylia.

The Memorial Line.

- GAL = PonGalaPaphGalap Is-Pis.

Syria was divided into four parts: Syria Propria, Phenicia, Colosyria, Palestina.

PALestine was distinguished into Galilæa, Samaria, Judæa, Peræa or Judæa beyond Jordan, Idumæa.

The Memorial Line.

Syr = SyrpPhen-Celo-Pal. PAL = GálSamaJudæ-Per Idum.

^{*} Among the several regions of Cappadocia was Lycaonia.

TABLE XVI.

ANCIENT GALLIA, GERMANIA, IBERIA, BRITANNIA.

1. Gallia was divided by Augustus into four parts or provinces, viz. Gallia Belgica, Gallia Celtica or Lugdunensis, Gallia Aquitanica, and Gallia Narbonensis—Gall—BelCeltAquiNarb

2. The inhabitants of ancient Germany were comprehended under four general denominations, viz. Ingævones, Vandali, Istævones, Hermiones—Germ=Ing-Vand

lst-Her.

3. IBERIA, or ancient Spain, was distinguished into three general parts, viz. TARraconensis, Lusitanica, B-œtica—IBERI—TarLuB.

4. Britannia, according to the last division by the Romans, was distinguished into five parts, viz. Valencia, Maxima Cæsariensis, Britannia Secunda, Flavia Cæsariensis, Britannia Prima—Brit=ValMax, Britse-Fla, Britprim.

The Memorial Lines.

Gall=BelCeltAquiNarb. Germ=Ing-Vand Ist-Her. I=TarLuB.

— Brit=ValMax, Britse-Fla, Britprim.

The Memorial Lines for all the ancient Geography.

EUR=Sca-Fe, Sarm, Cimb-Cod; Ger-S, G-Rhæ-V-No-Pa-D; Ib-lta-PIll-M@G-Th,

AS=ScythiSogd, Col-Ib-Alb; Asm-Arm, Sy-Mes-Ass-Med-Hy-BactArch,

Bab-Sus-Parth-AriDran, Pers-Car -Gedro, NInd-Se-Sin; Ar -P-Ind.

AF=MauT-Cæs-Numid-AfP-Liby-(Cyr-Mar)-E, GætGara-NasPsyl;

Libydes = Atlant Phau Nig-Nub-Æth; Léucæth-Erem-Blem.

Cis = Lig-Tau-Sé-Sa-Lep-Eug-Rhæt-Car-Is, Vén (P) A-Bo-Ling-Sen;

Lib-Læv-Ins-Oro-Cen. --

IT = Etru-Sab-Lá-Ca-Pi-G, Um-Pí-V-Ma-Fr-Ap, Mars-PeliSamn-Hirp.

GRÆ=MáTh, Epir-HelPel. Pelop = Ach-Eli-Méss-

Lac-Ar-Arcad.

EP = Chao-Dry, Thesprot-Cass-Amphiloc, Al-Mol-A carnan.

GRE-PROPRI = Dó-LocrEp, Æto-LocrOz-Pho-Bœ-Meg-Att.

THESS=Pelas EstThéss-Phthi-M. MACE=Taul-Page

Mygd-Æmath -AmphPi.

Asm=Asp-Bith-Pó-Ga-Capp: Lyci-Pamphy-Cil. ____ Asp = Phrygimin-Mysimi-m, Æol Ioni-Lyd-Phryma, CarDo.

- GAL=PonGalaPaphGalap Is-Pis.

SYR = Syrp Phen-Celo-Pal. PAL = GálSamaJudæ-Per Idum.

GAEL=BelCeltAquiNarb. GERM=Ing-Vand Ist-Her. I=TarLuB.

- BRIT=ValMax, Britse-Fla, Britprim.

TABLE XVII.

REMARKABLE PLACES IN ANCIENT GEOGRAPHY.

ABDERa in Thracia Berytus in Phanicia Helicon in Phocis HALICARnassus in Doris in Samos Ata in Comagene Asia Minor CHEROnæa in Bæotia Cannæ in Pencetia Arbela Assyria GRANicus river of Phrygia Mæander river of Lydia TAGUS river of Lusitania Issus promont. of Cilicia Patmos one of the Sporades O Lympus Islands OLYMpia in Elis

Pylus in Messene MARATHON in Attica Delphos in Phocis Dyrrachium in Macedonia THESSALonica in Amphaxitis Nicomedia in Bithynia Nyssa in Megaris Acroceraunia m. in Epirus CITHERON m. in Beotia Hymettus m. in Attica ATHOS m. in Macedonia mountains in PELion Thessalia O-ssa

MANTinea in Arcadia EPIDAUrus in Laconia Pella in Emathia Actium in Acarnania Ambracia SMYRNa in Ionia EPHesus PERGamus in Mysia LAODicea in Caria SARDIS THYAtira in *Lyd*ia Philadelphia Sardica in Thracia CHALcedon in Bithynia CIRTium in Numidia Illiberis in Hisp. Batica Ancyra in Galutia GANGra in Paphlagonia SIRMium in Pannonia Neocæsarea in Cappadocia Pharsalia in Thessalia *Philippi in Thracia Leuctra in $B\alpha$ otia Clusium in Etruria Bara in Campania Tusculum in Latinm AQUILEIa of the Carni Edessa in Mesopotamia RHEGium in Calabria Tomi in Masia Damascus in Cælo Syria Colossæ in Phrygia SAGuntum in Hispania Tarraconensis Brundusium in Calabria Comagene a region of Syria Propria

Do Done a town of the Molossi Sparta in Laconia Antiochia in *Pisid*ia Antium of the Volsci Amyclæ in *Lac*onia Ariminum in Umbria Corinth in Achaia CENCHRææ Eleusis in Mcgaris ACERRæ in Campania CHALCIS in Ætolia Corfinium) of the Pe-MEMPHis in Inferior Egypt Thebais in Superior Egypt Mycenæ in Argia Patara in Lycia CHALYbes a people of Galatia Nemea in Argia ADRAMYTtium in Mysia CNIdus in Doris in Asia MEDIOLanum of the Insubres SYRACUSE in Sicily Paravia of the Veneti Illium in Phrygia Minor CARBALIa in Pamphylia Lycaonia in Cappadocia Cyzicum in Musia Cuma in Æolis Pisidia part in Pamphylia, part in Galatia Cures of the Sabini LAVINIUM in Latium Arpea of the RutuliPortus LIBURNUS in Etruria Tegwa in Arcadia

^{*} Why Philippi is said to be in Macedonia, Acts xvi. 12, see Wells's Geography, chap, xv., and Pearce on the Epistles.

 $_{
m Vo\,Lsci}$ Lucani in Oenotria BRUTII SABæi OENOTria | parts of Gracia MESSAPia (Magna DAUNIA PEUCETia | parts of Apulia ÆQUi Tyrus in Latium Novum HERNI Sidon MUTINA of the Boii Ravenna in Umbria CALAbri in Messapia SALentini

| Volsci | Ausones | in Latium Novum | Sabæi | Saracen | sarabia Felix | Nabathæi in Arabia Petræa | Nomades | in Arabia | Scenitæ | Deserta | Tyrus | Sidon | Sidon | Phænicia | Hippo in Numidia | Palmyra in Cælo-Syria | Nola in Campania | Tarentum of the Salentini

The Memorial Lines.

Abder Thra, Bery Phan, Helico Ph, Halicar Dor-A, Cher-Ba,

Can Peucet, Arb Ass, Gran Ph, Mæ Lydi, Tág Lusit, Is Cil, Pat Sporad, Olym Elis, Pyl Mes, Marath Attica, Del Pho, Samósa Com, Dyrr Mac, Thessal Amphax, Nic Bithy, Nyss-

Meg,

Acroc Epir, Cith Bæ, Hym At, Ath Mac, Ol-Pel-O Thessal, Mant Are, Epidau Lac, Pell Æmath, Act-Am Acarnan, Smyrn-Eph Ion, Perg Mys, Laod Car, Sard-Thya-Phil Lyd, Sard Thraei, Chal B, Cirt Num, Illib Hisp-Bæt, Anc Gala,

Gang Paph,

Sirm Pan, Neocæs Cap, Phars Thessa, Philip Thraci, Leuc Bæ, Clus Etru, Bai Campa, Tusc Lat, Aquilei Car, Edess Mes, Rheg Calabri, To Mæs, Dam Cæl-S, Colóss Phrygi, Sag Tar, Brund Cala, ComS, Dod Mol, Spart Lac, Antóch Pisid, Ant Vols,

AmycLae, Arim Umb, Cori-CenchrAch, Eleus Meg, Acerr-

Camp,

Chalc £t, Corfini Pel, Sulm Pel, Memphinfer E, Thebsüp E, Mycen Arg, Pata Lyc, Chaly Gal, Nem Arg, Adramyt Mys, Cni Dor-A, Mediol Ins, Syracu Sici, Pat Venet, 11 Phry-n, Carbáli Pamph, Lyca Cap, Cyzi Mys, Cum £oli, Pis Pam-G, Cur Sab, Lavini Lat, Ard Rnt, Liburn Etru, Teg Arc, Luc-Brut Oenot, Oeno Græ-m, Messap Græ-m, Dauni-

Peucet Ap.

Æqu-Hern Lat-u, Muti Boi, Ravu Umb, Cala-Sal Me, Vol-Aus Lat-u,

Sab-Sáracen Ara-Fel, Nabath Pet, Nom-Scen Arab-Des, Tyr-Sid Phæn, Hippo Num, Palm Cæl-S, Nol Campa, Tarent Sal.

TABLE XVIII.

THE CORRESPONDENCE OF ANCIENT AND PRESENT GEOGRAPHY.

REGIONS AND PROVINCES.

Ancient.	Present.	Ancient.	Present.
	Poland		(Moldavia
SARMatia \	Great Tartary	Dacia	$A \leq Wa$ lachia
	south part of		Transilva.
Ta- $RusL$	Russia	Liburnia.	. Croatia
-(<i>L</i> ivonia		<i>€ Cro</i> atia
CIMBrica Che	r- $Jutland$	ILLIRICUM	* \big(Dalmatia
sonesus	Juliand	Noricum.	§ Bavaria
*Insula CODA	$- \}_{Zeal}$ and	NORICIIII.	* \ Austria
Nonia	} Zentand	VINDilicia	∫ Suabia
Scandinavia	(Norway	VINDINGIA	` \ Bavaria
or B-altia	{ and part of		(Grisons
or D-attia	Sweden	Rнæтia .	$A \subset Tyr$ ol and
Scythia As.	& { Great		part of Italy
Socdiana	$\int T$ artary	HELVetii .	. Switzerland
A chaia or He	llas <i>Livad</i> ia	ALLOBroges	
Epirus	. Chimæra	Colchis .	. Mingrelia
THESSaly .	. Janua	IBERIA	} Georgia
Mœsia superio	or . <i>Ser</i> via	A LBania .	S acorgia
Mœsia inferio		GETULIA.	. Bildulgerid
PELoponnesu		Africa Pro	, ,
Тигасіа	. Romania	pria	. and Tunis
Pannonia .	. Hungary	Mauritania	$\int Fez$ and
		1	· \ Morocco

^{*} Zealand, Funen, and the adjoining isles had the common name of Insulæ Æmodes, and were esteemed isles of ancient Germany, being inhabited by the Teutoni, called also Codani.

Numidia	Albion Britain Ligures Genoa
TAURICA The penin-sula of Lit-	Albion . Britain Ligures . Genoa Armenia Maj. Turcomania

The Memorial Lines.

SarmPo-Ta-RusL, CimbJut, CodanZeal, Sca-BSwe-No, Scyth-Sog T,

Ach Livad, Epi Chim, Thess Jan, Mes Sér-B, Pelo Mor,

 $\operatorname{Th} Rom$,

Pan Hung, Daci Mol-Wa-T, Libur Cro, Illyri Cro-Dal, Nor Bavar-Aus, Vind Sua-B, Rhæt Gris-Tyr-It, Helv-Swit, Allób Sav,

Colch Ming, Iber-Alb Geor, Gætul Bild, Africa Trip-Tun, Mau Fez-Mor, Liby Barc, Numid Alg, Lib-des Zara, Nig-Neg,

Taur-Chers Tart, Gara Zaar, Numi-nov Bil, Sogd Zagat, Ib Spain,

Canta Bis & Alb Brit, Ligu Gen, Arm Turc-Ala, Mesp Di.

TABLE XIX.

SEAS, STRAITS, GULFS, ISLANDS, RIVERS, TOWNS.

Ancient.

Mare Hyrcanum, or Caspium. Sea of Sala or Backu
Pontus Euxinus Black or Euxine Sea
ÆGæan Sea Archipelago
PROPONTIS Sea of Marmora
Palus Mæotis Sea of Azov
FRETUM GADITANUM . . . Strait of Gibraltar
Bosphorus Cimmerius Strait of Caffa
Bosphorus Thracicus Strait of Constantinople

Ancient.			Present.
Hellespontus			. Strait of the Dardanells
Sinus Adriaticus			
SINUS SALAMinius .			. Gulf of Engia
Sinus Gangeticus	,		
Sinus Persicus			
Sinus Corinthiacus			. Gulf of Lepanto
			. Red Sea
FRETUM SICUlum .		•	. Straits of Messina
Sinus Ambracicus .			. Gulf of Larta
Mare Ligusticum			. Sea of Genoa
SINUS MAGNUS			
Mare Tyrrhenum .		•	. Sea of Tuscany

ISLANDS, RIVERS, AND TOWNS.

THULE . Iceland EDUSUS . Yvica BALEARES { Majorca Minorca Ins. Eoliæ . Lipari Isles I.FORTUNATÆ Canaries *HESPERIDES C. Verd TABROBANA Ceylon COS Lango CRETE . Candly CASSITERIDES Scilly Isles EUBÆA vel { Negropont CHALCIS ITHACA . Ile di Compare ÆGINA . Engia CERNE . † Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa DIOSCORIDES * Vyica GADES . Cadiz CYRNUS . Corsica SALAMIS . Coluri CARPATHUS . Scarpanto TRINACRIA . Sicily CYTHERON . Cerigo M. ÆTNA . Gibel M.VESUVIUS Soma Lacus TRA- Lake of SIMENUS Perugia RUBICON . Fiumecino PADUS Or ERIDANUS Po ERIDANUS Fiumecino PADUS OR ERIDANUS Po ERIDANUS	Ancient. Present.	Ancient, Present.
Baleares { Majorca Minorca Minorca Minorca Minorca Salamis Coluri Carpanis Carpanto Carpanis Carpanto Carpanis Carpanto Carpanis Carpanto Carpanis Carpanto Carpanis Carpanis	THULE Iceland	Lemnos Stalimene
Ins. Æoliæ . Lipari Isles I.Fortunatæ Canaries *Hesperides C. Verd TABROBANA Ceylon Cos Lango CRETE . Candy CASSITERINACTIA . Gibel M.VESUVIUS Soma Lacus Tra- Lake of SImenus Perugia RUBICON . Fiumecino PADUS or ERIDANUS CERNE . †Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa CARPATHUS . Scarpanto TRINACTIA . Sicily CYTHERON . Cerigo M. ÆTNA . Gibel M.VESUVIUS Soma Lacus Tra- Lake of SIMENUS Perugia RUBICON . Fiumecino PADUS or ERIDANUS ISTER . Danube BÆTIS . Guadalquiver TANAIS . Don RHA Volga	Epusus Yvica	GADES Cadiz
Ins. Æoliæ . Lipari Isles I.Fortunatæ Canaries *Hesperides C. Verd TABROBANA Ceylon Cos Lango CRETE . Candy CASSITERINACTIA . Gibel M.VESUVIUS Soma Lacus Tra- Lake of SImenus Perugia RUBICON . Fiumecino PADUS or ERIDANUS CERNE . †Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa CARPATHUS . Scarpanto TRINACTIA . Sicily CYTHERON . Cerigo M. ÆTNA . Gibel M.VESUVIUS Soma Lacus Tra- Lake of SIMENUS Perugia RUBICON . Fiumecino PADUS or ERIDANUS ISTER . Danube BÆTIS . Guadalquiver TANAIS . Don RHA Volga	BALEOROS Majorca	Cyrnus Corsica
I.Fortunatæ Canaries *Hesperides C. Verd TABROBANA Ceylon Cos Lango CRETE Candy CASSITERIDES Scilly Isles EUBœa vel THACA . Ile di Compare ÆGINA Engia CERNE †Madagascar LEUCAS St. Maura LESBUS . Metelin PATMOS . Palmosa TRINACTIA . Sicily CYTHERON . Cerigo M. ÆTNA . Gibel M.VESUVIUS Soma Lacus TRA-\ Lake of SIMENUS \ Perugia RUBICON . Fiumecino PADUS Or ERIDANUS ISTER Danube BÆTIS . Guadalquiver TANAIS . Don RHA Volga	Minorca Minorca	SALAmis Coluri
I.Fortunatæ Canaries *Hesperides C. Verd TABROBANA Ceylon Cos Lango CRETE . Candy CASSITERIDES Scilly Isles EUBœa vel { CHALCIS ITHACA . Ile di Compare ÆGINA . Engia CERNE . +Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa TRINACRIA . Sicily CYTHERON . Cerigo M. ÆTNA . Gibel M.VESUVIUS Soma Lacus TRA- Lake of SIMENUS { Perugia RUBICON . Fiumecino PADUS Or ERIDANUS ISTER Danube BÆTIS . Guadalquiver TANAIS . Don RHA Volga	Ins. Æoliæ . Lipari Isles	CARPathus . Searpanto
*Hesperides C. Verd TABROBANA Ceylon Cos Lango CRETE Candy CASSITERIDES Scilly Isles EUBœa vel CHALCIS ITHACA . Ile di Compare ÆGINA . Engia CERNE . +Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa CYTHERON . Cerigo M. ÆTNA . Gibel M.Vesuvius Soma Lacus TRA- Lake of SIMENUS Perugia RUBICON . Fiumecino PADUS or ERIDANUS Po ERIDANUS Fiumecino PADUS or ERIDANUS Po ERIDANUS Foundalquiver TANAIS . Don RHA Volga	I. Fortunatæ Canaries	TRINACTIA . Sicily
TABROBANA Ceylon Cos Lango CRETE Candy CASSITERIDES Scilly Isles EUBœa vel CHALCIS ITHACA . Ile di Compare ÆGINA Engia CERNE †Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa M. ÆTNA . Gibel M.VESUVIUS Soma Lacus TRA- Lake of SIMENUS / Perugia RUBICON . Fiumecino PADUS OF ERIDANUS Po ISTER Danube BÆTIS . Guadalquiver TAÑAIS . Don RHA Volga	*Hesperides C. Verd	
Cos Lango Crete Candy Cassiterides Scilly Isles Eubœa vel Chalcis Ithaca . Ile di Compare ÆGina Engia Cerne † Madagascar Leucas St. Maura Lesbus . Metelin Patmos . Palmosa M.Vesuvius Soma Lacus Tra- Lake of Simenus / Perugia Rubicon . Fiumecino Padus or Eridanus / Po Ister Danube Bætis . Guadalquiver Tanais . Don Rha Volga	Tabrobana Ceylon	
CRETE Candy CASSITERIDES Scilly Isles EUBœa vel CHALCIS Negropont CHALCIS THACA . Ile di Compare ÆGINA . Engia CERNE †Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa Lacus TRA- Lake of SIMENUS Perugia RUBICON . Fiumecino PADUS OF ERIDANUS Po ISTER Danube BÆTIS . Guadalquiver TAŅAIS . Don RHA Volga	Cos Lango	
CASSITERIDES Scilly Isles EUBœa vel CHALCIS Negropont CHALCIS THACA Ile di Compare ÆGINA Engia CERNE + Madagascar LEUCAS St. Maura LESBUS Metelin PATMOS Palmosa Rubicon Fiumecino PADUS or ERIDANUS Po Simenus Perugia Rubicon Fiumecino PADUS or ERIDANUS Po ERIDANUS Simenus Porugia Rubicon Fiumecino PADUS or ERIDANUS Po ERIDANUS Formation Palmos Po ERIDANUS Simenus Po Po ERIDANUS Po Fiumecino PADUS or ERIDANUS Po ERIDANUS Fiumecino PADUS or ERIDANUS Po ERIDANUS	CRETE Candy	
Eubœa vel CHALCIS Negropont CHALCIS THACA	Cassiterides Scilly Isles	
CHALCIS TREGIOPOINT PADUS OF ERIDANUS Po EGINA . Engia ERIDANUS ERIDANUS CERNE . +Madagascar Ister Danube EESBUS . Metelin Patinos	TO	Rubicon Fiumecino
ITHACA . Ile di Compare ÆGINA . Engia CERNE . †Madagascar LEUCAS . St. Maura LESBUS . Metelin PATMOS . Palmosa ERIDANUS STORNO . Danube BÆTIS . Guadalquiver TAŅAIS . Don RHA Volga	CHALCIS A Negropont	PADus or)
Egina Engia CERNe†Madagascar LEUCas St. Maura LESBUS Metelin PATmos Palmosa Egina	ITHACA . Ile di Compare	
CERNE†Madagascar LEUCas St. Maura LESBUS Metelin PATMOS Palmosa ISTET Danube BÆTIS Gnadalquiver TAŅAIS Don RHA Volga	Ægina Engia	,
LEUCAS St. Maura LESBUS Metelin PATMOS Palmosa BÆTIS Guadalquiver TANAIS Don RHA Volga	CERNE† Madagascar	Ister Danube
Lesbus . Metelin Patmos . Palmosa RHA Volga		
73	Lesbus Metelin	
73	Patmos Palmosa	
	Dioscorides Zocotra	

^{*} Called also Gorgades, † Madagascar is supposed by some to be the Menuthias of the ancients.

Ancient.	Present.	Ancient.		Present.
ARGENTORA-	1 Strachura	SAGuntum .		Morvedra
tum	} Strusburg	SAGuntum . CALPE		Gibraltar .
Moguntium .	Mentz	CoLonia AGRIPpinæ	1	Coloma
Colonia Allo	100000	AGRIPpinæ	. (Cologne
Colonia Allo brogum	Geneva	Lugdunum .		Luons
Rотноmagia .	Ronen	Lucdunum	7	T /
	Zurich	Lucdunum B-atavorum	.]	Leyaen

The Memorial Lines.

Casp Sala-Back, Eux Black, Æg Arch, Prop Mármo, Mæot-Zov,

Fret-Gádi Gib, Cimm Caff, Thraci Const, Hellesp Dar, Adrat Ven,

Sin-Salam Eug, Gan Beng, Pers Bals, Si-Corínth Lep, Aráb Red-S,

Fret-Sicu Mess, Amb Lart, Ligu Gen, Sin-Mag Sia, Tyrr-Tusc.

Thul Ice, Ebús Yv, Bale Ma-m, Æo Lipare, Fort Can, Hesp Verd, Taprob Ceyl, Cos Lang, Cret Candy, Cassit Scill, Chale-Eub Neg, Itha Comp, Ægin Eng, Cern Mada, Leuc-Maur,

Lesb Metelin, Pat Palm, Dioscór Zoc, Lem Stali, Gad Cad, Cyrn Corsie, Sala Col, Carp Scarp, Trinac Sici, Cyth Cer, Ætna Gi, Vesuv Som, Trasi Per, Rubi Fíum, Pad-Erid Po.

Ist Danu, Bæt Gúadal, Tana Don, Rha Volga, Boryst Niep. Argent Stras, Mog Mentz, Col-All Gen, Rótho Ro, Tig Zur,

Sag Morved, Calp Gib, Col-Agrip Col, Lug Lyo, Lug-B Leyd.

N. B. It was thought needless to give more examples, especially of such as now have any likeness or affinity in their ancient names; as Tagus Taio, Sequanus Seyne, Rhenus Rhine, Garumna Garonne, Zacynthus Zante, Melita Malta, &c.

GEOGRAPHIA SACRA.

TABLE XX.

THE PLANTATION OF THE EARTH AFTER THE FLOOD.

AND first, the several countries mentioned in holy Scripture, and denominated from some of the posterity of SHEM, viz.

Ophir, conjectured to be part of the East Indies, viz. Aurea Chersonesus of the ancients—Oph Chers.

HAVIlah, part of Susiana and Caramania—HaviSus-Car.

Elam, part of Susiana and Persis-ElaSus-Pers.

Asshur, or Assyria properly so called, into which Nimrod is said to come and build Nimeyeh, &c.—Asshur.

ARAM, part of Syria and Mesopotamia—ArámSy-Mes. Land of Uz, Judæa Peræa and the adjoining parts of ARAbia Deserta and Petræa—UzJúp-Arad.

LUD, or Lydia in Asia Minor—Lud Lyd.

The Memorial Lines.

Oph Chers, Havi Sus-Car, Ela Sus-Pers, Arám Sy-Mes, Asshur,

UzJúp-Arad, LudLyd. ---

Countries mentioned in the Scriptures, and denominated from the posterity of JAPHET, (eldest son of Noah,) whose family is supposed to have peopled, besides a considerable part of Asia, all Europe.

MADai, called by heathen writers Media-Mad.

GOMER, thought to be Albania, on the Euxine Sea-Gomer Alb.

Togarmah, Cappadocia—Toga Cap. Ashкenaz, Phrygia—Ashke Ph. Tubal, Iberia in Asia—Tub Ibéri. MESHECH, the country lying about the Montes Moschici, between Colchis and Armenia Major—Meshéch Mosch.

Magog, the parts of Scythia adjoining to the plantations of Meshech, Tubal, and Gomer—MagScythi-Mesh.

Javan, ancient Greece-JavGree.

ELISHAH, or the Isles of Elisha, the Isles of the Archipelago—Elish Arch.

KITTim, understood of Italy, Dan. xi. 30, and of Mace-

donia in the book of Maccabees-KittIta.

TARSHISH, by Josephus understood to be Cilicia, by others Old Spain, by others Carthage—TarshCil.

The Memorial Lines.

Mad, Gomer Alb, Toga Cap, Ashke Ph, Tub Ibéri, Meshéch Mosch,

Mag Scythi-Mesh, Jav Gree, Elish Arch, Kitt Ita, Tarsh Cil.

Countries mentioned in Scripture, denominated from the posterity of HAM (youngest son of Noah), whose family peopled Africa, with the adjoining parts of Asia.

Land of Cush, (commonly rendered Athiopia,)—Cush Athiop,—under which name seems to have been contained most of Arabia, distinguished into several parts, denominated from the posterity of Cush, as,

SHEBA, Arabia Felix—ShebAra-f.

Havilah, part of Arabia Deserta, next to Babylonia
— Hav Ara-d.

Raamath and Depan, parts on the Persian Gulf—-Ra-DédPe-Gu.

MIZRaim, or Ægypt-MizrÆ.

Lub or Lybim, that is, Lybia properly so called—Lub. Phut, the more remote parts of Libya largely taken—PhutLib.

Land of CANAan lying between the river Jordan and the Mediterranean—CánaJor.M.

Land of HAMATH, north part of *Phan*icia and adjoining parts of Syria Propria—Hamáth *Phan-S*.

ARvad, or Arpad, or the Isle Aradus, lying over against

Hamath-Arv Hama.

Land of the Philistines, Palestine Proper--PhilPal.

The Memorial Lines.

Cush Ethiop, [Sheb Ara-f, Hav Ara-d, Ra-Déd Pe-Gu,] MizrÆ.

Lub, Phut Lib, Cána Jor-M, Hamáth Phæn-S, Arv Hama, PhilPal.

TABLE XXI.

DIVISION OF THE HOLY LAND.

THE kingdom of JUDAH contained the tribes of Judah and B-enjamin-Ju-B.

The kingdom of ISRAEL contained the tribes of

A-sher, Nephtali, Zebulon, Issachar, half of Manasseh, Dan, E-phraim, west of Jordan

Simeon REUBEN, G-ad, the other half of M-a- } east of Jordan

The several nations were the Canaanites, the GIR-Gashites, the HITtites, the HIVites, the Amorites, the Jebusites, and the P-erizzites.

The Memorial Lines.

ISR = A-NeZe ·M, IssMa ·G, Dan-E ·Réub, Si: Ca-Girg-Hit-Hiv, Am-Je-P.

THE DIVISION OF THE HOLY LAND IN THE NEW TESTAMENT COMPARED WITH THE DIVISIONS THEREOF AMONG THE TWELVE TRIBES IN THE OLD TESTAMENT.

Galilee contained A-sher, Nephtali, Z-ebulon, and Issachar-GAL=A-NeZIss.

Samaria contained Ephraim, with the half of Manasseh -SAM=Man Eph.

Judæa contained DAN, parts of Simeon and Judah, with B-enjamin-Ju=DánSi-Ju-B.

I Dumæa contained the south parts of Simeon and J-udah, and some part of the land of E-dom-ID= Si-JE.

PERæa contained R-euben, GAd, and the other half of M-anassch-PER=MGaR.

The Memorial Line.

GAL=A-NeZIss. SAM=ManEph. Ju=DánSi-Ju-B. ID=Si-JE. PER=MGaR.

The land of EDOM bordered on the south of Judæa-Edóms Jud.

The land of the MoAbites lay on the north-east of Edom
—Moane Ed.

The land of the Ammonites lay on the north-east of Moab—AmneMoab.

The Ishmaelites, Madianites, and Amalekites lived promiscuously together, and therefore seem to be denoted by the common name of the Mingled People, or Arabians, from DR miscuit, from whence the Greek appellation of "Apath, or "Apathec—Ish-Mad-Am Arab.

The Memorial Line.

Edóms Jud, Móane Ed, Amne Moab, Ish-Mad-Am Arab.

TABLE XXII.

THE MOST REMARKABLE RIVERS, WITH THE PLACES WHERE THEY RISE, AND THE SEAS INTO WHICH THEY FALL.

IN EUROPE.

The Volga, the greatest river in Europe, rises in Russia, and falls into the Caspian Sea—Vol Rus-Ca.

The Danube rises in Suabia, and falls into the Euxine Sea—DanSuab-Eux.

The RHINE rises in the country of the Grisons, and falls into the German Ocean-Rhin Gris-Ger-O.

The Vistula, or Wesel, rises in Poland, and falls into the Baltic—Vist Po-Ba.

The Nieper rises in Poland, and falls into the Euxine Sea-NieP-Eux.

The Dwina rises in Russia, and falls into the gulf of the Northern Ocean, called the White Sea—DwinRus-Whi.

The TAIO in Spain falls into the Atlantic Ocean—TaiSp-Atl-Oc.

The Elbe in Germany falls into the German Ocean—Elb Ger-Oc.

The Oper in Germany falls into the Baltic-OdBalt.

IN ASIA.

T-igris and EUPHrates rise in Armenia Major, and, having joined streams on the south-east of Mesopotamia, fall into the Sinus Persicus—T-EuphArm-SiP.

JORDan rising in the border of Nephtali, and passing through the Lake of Gennesaret, falls into the Salt Sea

-Jord Neph-Salt.

Ganges in India falls into the Bay of Bengal GanI-Beng.

IN AFRICA.

The Nile, running through the middle of Egypt, falls into the Mediterranean—NilMedi.

The Senegal runs through Negroland into the Atlantic Ocean—Sén At.

The Memorial Lines.

Vol Rus- Ca, Dan Suab-Eux, Rhin Gris- Ger-O, Vist Po-Ba, Nie P-Eux,

Dwin Rus-Whi, Tai Sp-Atl-Oc, Ib-Rhod Med, Elb Ger-Oc, Od Balt;

T-Euph Arm-SiP, G an \overline{I} - $\overline{B}eng$, J ord Neph-Salt; Nil Medi, S and At.

ASTRONOMICA.

SECTION IV.

THE APPLICATION OF THIS ART TO ASTRONOMY AND CHRONOLOGY.

The technical endings affixed to the beginnings of the names of the planets, represent the number of miles of their diameters, distances, magnitudes, &c. according to the general key. Where the beginning of the word is technical, it is composed of the syllables or letters distinguished in the tables by small capitals.

TABLE I.

THE D-IAMETERS, &c. OF THE PLANETS IN ENGLISH MILES,
ACCORDING TO DR. DERHAM'S ASTRO-THEOLOGY.

								English Miles.
Luna-Lu-ddapu				6				2,175
MERCUTY-Mercú-depok								2,748
Mars-Mar-dokpu								4,875
Venus-Ve-doneip								4,987
TERRE DIAmeter-Ter-di	ia <i>p</i> o	ousc	i,k					7,967.8
Saturn—Sa-dní-olu								93,451
Jupiter-Ju-daty-sli .								130,653
Solis Diameter-Sol-dia	ed-	áfe	i					822,148
The D-iamete	ers (of t	thei	r O	RE	sits		
SATurn-D-orb-Sátasob-l	es-t	eis				. 1.	6	41.526.336
Jupiter-Ju-rbkoúl-atoth								

			English Miles.
Mars-Ma-rbese-deid-naz			262.282,910
TERRE-D-orb-Terboid-áze-poul .			172.102,795
Mercury-Me-rbsau-sebth			66.621,000
VEnus - Ve-rbbef-okoí-baf			124.487,114
Luna-D-orb-Lunopóu-nyl			479,905
SATurni Annuli Diam. or the diame	ter	of	
Saturn's ring-Sat-anu-didáz-daul			210,265
-Ejusdem LATItudo, or the bread	lth	of	
Saturn's ring — latidoú-eg			29,200
TERRE SUPERficies, or the superficial	co	n-	*
tent of the earth-Ter-superann-fof-	-e≈e	ıu	199.444,206
Ejusdem Diameter diapou	soi	,k	7,967.8
Ejusdem Orbitæ Perimeter			
mufy-skau-del			540.686,225

THE MAGNITUDES OR SOLID CONTENTS IN CUBIC MILES OF THE LARGER PLANETS.

MAGNITUdo.

MAGNI	Tudo.
	Cubic Miles.
TERRE-Ter-magnitéso-klaum	264,856,000,000
Solis - Mag-Sólisëouz-noia	
mil-mil	. 290,971.000,000.000,000
Jovis - Mag-Jovnez-záb-ezyn	n 920.011,200.000,000
SATurni - Sat-magnitoép-da	k
& izym	
1. The Ambit or	Circumference.
1. 1.10 11.1010 01	English Miles

The Memorial Lines.

379,043

2.582,873

25.031

Lu-ddapu, Mercú-depok, Mar-dokpu, Ter-diapousoi,k, Ju-daty-sli, Ve-doncip, Sa-dní-ola, Sol-diked-áfei.

Jovis-Am-Jovisipoú-zot .

T-erræ—Am-Tel-yib. . .

Solis-Am-Sole-leid-koit .

D-orb-Sátasob-les-teis, Ju-rbkoúl-atoth, Ma-rbese-deid-naz, D-orb-Terboid-áze-poul, Me-rbsau-sebth, Ve-rbbef-okoí baf, Sat-anµ-didáz-daul, —latidóu-eg, D-orb-Lunopóu-nyl, Ter-superann-fof-ezau, —diapousoi,k, — permufy-skau-del,

Ter-magnitéso-hlaum, Mag-Sólisëoúz-noia-mil-mil, Mag-Jovnez-záb-ezym, Sat-magnitoép-dak & ízym.

Am-Jovisipoú-zot, Am-Tel-yib, Am-Sole-leid-koit.

TABLE II.

THE DIAMETERS, &c. OF THE PLANETS, ACCORDING TO MR. WHISTON.*

•	. 2,2237	}
	. 2,717	
	. 2,816	Tr., .11 1 379
	. 52,522	of 5000 Paris
	. 4,941	feet.
	. 494,100	
	•	. 2,223 . 2,717 . 2,816 . 8,202 . 52,522 . 4,941 . 43,925 . 494,100

2. Their Distances from the Sun.+

SATurn - Dista-Satlái-lozth			English Miles. 513.540,000
MARS-Dist-Marke-dodth .			82.242,000
MERcury-Dist-Merez-ouleth			20.952,000
Jupiter-Jupideiz-uketh .			280.582,000

* Theory of the Earth, page 31, &c.

† The distances of the planets from the Sun, according to Dr. Derham, are as follow:

SATurn-Dist-Satkez-paût-ani		820.763,193
Mars-Dist-Marbib-bob-olu .		131.141,455
Mercury-Dist-Merit-ibz-ug.		33.310,500
Jupiter-Dist-Jupifop-usoith		447.567,000
Terra-Dist-Terkau-sub-touk		86.051,398
Venus-Dist-Vese-dot-lup		62.243,557

TERra—Dis-Terlom
3. The QUANTITY of matter in the heavenly bodies is in the proportions following:
Terra-Quan-Tera
Luna-Quan-Lun.res
Jupiter—Quan-Jupsy 60.
Luna—Quan-Lun, res
Sol-Quan-Solsau-sny
, and the same of
4. The weight (Pondus) of bodies on the surface of
SATURN-Pon-Sáturuts 536
Luna-P-Lunsiz 630
Jupiter—Pon-Jukzo,re 8042
TERra—Pon-Teraduk, rc 1,258
Sol-Pon-Solazth
5. The Densities of the same.
Sol-Den-Solag 100
Luna—Den-Lunoig 700
Luna—Den-Lunoig
Saturn—Den-Sasy 60
Jupiter—Den-Jups
N. B. Mr. Whiston supposes the Sun's parallax to be 32". Dr. Derham (with Cassini) 9 sec. and a half.

32". Dr. Derham (with Cassini) 9 sec. and a half.

The Memorial Lines.

- 1. Lu-ddedi, Mércú-depap, Mar-dekbau, Ter-diakéze, Ju-dle-led, Ve-donob, Sa-dot-nel, Sol-difonf-ázy.
- 2. Dista-Satlái-lozth, Dist-Márke-dodth, Dist-Merezouleth,

Dist-Jupideiz-uketh, Dis-Terlom, Dista-Vetou-znauth.

3. Quan-Tera, Quan-Lun, res, Quan-Jupsy, Quan-Saturek, ro,

Quan-Solsau-sny.

- 4. Pon-Sáturuts, P-Lunsiz, Pon-Juhzo, re, Pon-Tx-aduk, re,
- 5. Den-Solag, Den-Lunoig, Den-Tertcip, Den-Sasy, Den-Jups.

TABLE III.

THE PERIODICAL TIMES OF THE R-EVOLUTIONS OF EACH PLANET ABOUT THE SUN ARE AS FOLLOW:

MERCURY	in			88			months.
VENUS.				224	days,	7 1	months.
MARS.				687	or ·	2	years.
Jupiter				4,333	about	12	years.
				10,759			years.

The Memorial Lines.

Merc-reik, Sat-razpun, Mars-raukoi, Ven-redo, Jup-rottt, Merc-revo-ment, Ve-r-mep-h, Mars-r-and, Jup-r-anbe, Sat-r-anty.

N. B. Men vel me Mensibus, an Annis, h half.

The DISTance of the Earth from the Sun being divided into ten parts, or Decimals, the distance of MERCURY from the Sun will be as 4 of them, of VENUS as 6, of MARS as 15, of JUPITER as 52, of SATURN as 95.

The Memorial Line.

Ter-distaz, Méro, Vens, Marsal, Jupiterle, Saturnoul.

The Sun is distant from the Earth 21,600 Semidiameter of the Earth=86.051,398 miles.

The Moon 60½ semidiameters=239,952 miles

The Memorial Lines.

Dist-Sol-sémida-syz=kau-zub-touk. —— ——Dista-Lun-semsy,ro=din-nud.

The motion of the Sun round its axis is performed in 25 days and 6 hours—Sol-xdu,ro. The motion of Jupiter round its axis is performed in 9 hours 56 minutes—Ju-x-u,us; that of the Earth in 24 hours; so that the motion of the Sun round its axis is at the rate of 4,262 miles an hour—Sol-mfese; the motion of Jupiter round its axis 38,159 miles an hour—Ju-mteibun; the motion of the Earth round its axis is 1,043 miles an hour—Ter-mázfi.

The Memorial Line.

Sol-mfese, Ju-mteibun, Ter-mázfi, Sól-xdu, ro, Ju-xn, us.

The apparent diameter of the Sun in summer (ÆSTATE Solis Diameter) is 31 M-inutes 40 S-econds—Æstat-Sodi-mib-soz.

In winter (HYEme) 32 M-inutes 47 S-econds -

----hye-mid-sop.

If the Sun is supposed to go round the Earth, its diurnal motion will be 22.523,366 M-iles in an Hour—Sol-m-hode-lek-taus.

The Memorial Line.

Æstat-So-di-míb-soz, ——hye-míd-sop; Sol-m-hode-lek-taus.

The three CoMets, whose periods were thought to have been discovered. Derham's Astro-Theology, p. 56.

That which appeared $\begin{cases} 1682 \\ 1661 \\ 1680 \end{cases}$ calculated to $\begin{cases} 75 \\ 129 \\ 575 \end{cases}$ and to $\begin{cases} 1758 \\ 1789 \\ 2255 \end{cases}$

Comske-pu sáub-adou sky-loil: puk pein & cëlu.

The Memorial Lines for all the Table.

Merc-reih, Sat-razpun, Mars-raukoi, Ven-redo, Jup-rottt, Merc-revo-ment, Ve-r-mep-h, Mars-r-and, Jup-r-anbe,

Sat-r-anty.

Ter-distaz, Méro, Vens, Marsal, Jupiterle, Saturnoul.
Dist-Sol-sémida-syz=kau-zub-touk, Lunsy,ro=din-nud.
Sol-mfese, Ju-mteibun, Ter-mázfi, Sól-xdu,ro, Ju-xn,us.
Æstat-So-di-míb-soz, ——hye-míd-sop; Sol-m-hode-lektaus.

Comske-pu saúb-adou sky-loil: puk pein & cëlu.

TABLE IV.

CHRONOLOGICAL NOTES.

CHRONOLOGICAL ROL	200				
	d.	h.	m.	s.	th.
Solar month (MENSIS SOLARIS) consists of—Men-Solar ty-by-dou. Lunar Synodal month—Synodén-	30	10	29	0	0
<i>be-ff-t</i>	29	12	44	3	0
Lunar Periodical month - Men-		_			
peridoi-p-ot	27	7	43	0	0
The cycle of the Moon less (Cyclus					
Lunaris Minor) than 19 Julian					
years-Cyc-Lu-min-ha-doi-ta-ll	0	1	27	31	55
[This difference arises to a whole					
day, and consequently throws the					
new moons back a whole day in					
312 years (ANNIS)—Anntad.					
312 years (Annis)—Anntad.] The tropical or natural solar year					
The tropical or natural solar year					
The tropical or natural solar year less than the Julian (Annus Tropicus Minor Juliano) 11 M-inutes					
The tropical or natural solar year less than the Julian (Annus Tropicus Minor Juliano) 11 M-inutes — Trop-min-juli-mab; and con-					
The tropical or natural solar year less than the Julian (Annus Tropicus Minor Juliano) 11 M-inutes — Trop-min-juli-mab; and consequently the equinoxes happen a	0	0	11	0	0
The tropical or natural solar year less than the Julian (Annus Tropicus Minor Juliano) 11 M-inutes — Trop-min-juli-mab; and con-	0	0	11	0	0

The Epacaz-da-b		h. 21			
The solar year (Solaris Annus)— Sól-anisú-l-on Between the VERNal and AUTum-					
nal equinox Vern-autaks-hak- miz	186	18	30	0	0
Between the AUTUMnal and VER- Nal equinox — Autum-vernboik- ab-an	17 8	11	19	°0	0

The Metonic period was invented by Meto, in the year before Christ 430, consisting of 19 years—Metfiz-bon.

The CALIPpic period was invented by Calippus, in the year before Christ 330, consisting of 76 years—Calipitz-ois.

The Dionysian period was invented by Dionysius Exiguus, An. Dom. 527, consisting of 532 years—Diolep-lid.

The Junion period was invented by Joseph Santagar.

The Julian period was invented by Joseph Scaliger,

consisting of 7,980 years—Júl-Scalipóuky.

The vulgar year of Christ was in the fourth of the indiction, the tenth in the cycle of the Sun, the second of the cycle of the Moon.

Indic. crat quarto, decimo Sol, Luna secundo.

TO FIND THE YEAR OF THE JULIAN PERIOD, THE YEARS OF THE OTHER CYCLES BEING GIVEN.

Multiply the cycle of the Sun into 4845—Sol in okol.

the cycle of the Moon into 4200—Lunfeg.

the Indiction into 6916—Indicsnas.

Divide the Product by 7980—Div-produpouky.

The remainder is the year.

The Sunday letters which begin every month are frequently known by the two English verses,

At Dover dwells George Brown, &c. (see p. 182.)

But perhaps they may be more readily remembered by the following line, which lays the reader under no necessity of counting the order of the words before he can tell which month they answer to, every month ending with the letter which belongs to the first day of it.

Ja Fd Mád Aprig Mayb June Julg Aúc Sef Octa Novéd Def.

MARCH, MAY, JULY, October, have Nones on the 7th day, and the IDES on the 15th—Mar-Ma-Jul-Oc=Nop-Idal. The rest (CETeri) on the 5th and 13th—Catl-at.

April, June, September, and November, have thirty (TRIGINTA) days—Ap-Jún-Se-No=trigint.

The Memorial Line.

Mar-Má-Jul-Oc≐Nop-Idal, Cætl-at: Ap-Jún-Se-No =trigint.

In a year (Anno) are 365 Days, 8765 Hours, 525,949 Minutes, 31.556,937 Seconds.

An = Ditaul = Horeipaul = Minlel-non = Secta-lus-outoi.

The motion of the firmament, or fixed stars, is 50" in a year, or a degree in 72 years. According to which rate the motion (called the Platonic year) is accomplished in 25,920 years—An-Plato=dunez.

The twelve signs: Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius, Pisces.

Ar-Ta-Ge, Can-Leo-Vir, Lib-Scór-Sagi, Capric-Aquár-Pis.

The Memorial Lines for all the Table.

Men-Solarty-by-dou, Synodén-be-ff-t, Men-peridoi-p-ot, Cyc-Lu-min-ha-doi-ta-il, [Anntad], Trop-min-juli-mab, biz,

Mar-Má-Jul-Oc=Nop-Idal, Cætl-at: Ap-Jún-Se-No=trigint.

An = Ditaul = Horeipaul = Minlel-non = Secta-lus-outoi. An-Plato = dunez.

Ar-Ta-Ge, Can-Leo-Vir, Lib-Scór-Sagi, Capric-Aquár-Pis.

PONDERA, NUMMI, MENSURÆ.

SECTION V.

THE APPLICATION OF THIS ART TO COINS, WEIGHTS,
AND MEASURES.

The beginning of the words is composed of the initial letters; thus At-ta stands for Attic Talent; He-t for Hebrew T-alent; A-d for A-ttic D-rachm; Al-d for Alexandrian D-rachm; He-to for Hebrew Talent of gold (He-t standing for Hebrew T-alent, as before, and o for Or, or gold); Ro-l for Roman L-ibra, Den for Denarius, Shek for Shekel, Gre-f for Greciau F-oot, He-c for Hebrew C-ubit, Ro-fsq for Roman F-oot square, &c.

The italic endings of the words represent the number of pounds, shillings, and pence, which are separated from each other by hyphens, or else signified by the roman letters l.s.d. The double lines denote equality: thus A-m= drag = t-ei-n, signifies that an A-ttic M-ina, which is equal to 100 Drachms, was 3 pounds 8 shillings and 9 pence. The letters, though separated, are to be pronounced together; as t-ei-n, tein. The reader is to be reminded here that re signifies $\frac{1}{2}$, ro $\frac{1}{4}$, &c. according to the general rule, page 4. But note, that instead of the fraction re, the letter h is sometimes used for Half, as oihbe-h=7,812 $\frac{1}{2}$, sc. 7,812 pounds 10 shillings.

TABLE I.

HEBREW, ATTIC, BABYLONISH, ALEXANDRIAN MONEY.*	, AND	RO	MAN
	1.	3.	d.
An Artic Talent=60 M-inas—At-ta=			
$mauz=ez\acute{a}u$ -su	206	5	0
An A-ttic M-ina=100 Drachms—A-m=			
drag = t - ei - n	3	8	9
A Hebrew T-alent = 50 Minas = 3000			
Shekels—Hé-t= $mily=shith=fuz$	450	0	0
A Hebrew M-ina=60 Shekels—He-m=			
shauz=lou	9	0	0
A Babylonian T-alent-Ba-t=eoz-be-s .	240	12	6
A Babylonian T-alent of Gold—Ba-to=			
teilz	3850	0	0
An A-ttic T-alent of Gold-A-to=tig .	3300	0	Ó
A Hebrew T-alent of Gold—He-to=peg.	7200	0	0
An A-ttic D-rachm—A-d=dei,ro	0	Ü	$8\frac{1}{4}$
A Hebrew D-rachm—He-d=dou	0	0	9
A Roman L-ibra = 96 D-enarii—Ro-l=	• • • • • • • • • • • • • • • • • • • •		
dous=li	3	0	0
†A Roman Talent=72 Libræ—Róm-ta=	9	v	•
liboid=das	216	0	0
An Alexandrian DRACHm—Al-drach=	-10	v	0
sa-ds	0	1	6
An Italic Mina—Ita-mí=lt	3	0	0
A Shekel=2 Bekas—Shek=béd=si	0	3	0
A Roman D-enarius=4 Sesterces—Ró-d	U	J	U
	0	0	~1
=seso=doi,re	U	U	71/3
(vulgo HS.) duo asses cum semisse—			
Ses = da-fi,re, a penny three farthings	^	0	12
and half a farthing	0	U	13

^{*} See the Preface to Dr. Prideaux's Connexion.

[†] Others make a Roman Talent = 6000 D-enarii = 21 Sester tiums = 1871. 10s.—Tal=Dauth=Sésdo=lacip-h.

	1.	8.	d.
Sestertium, or 1000 S-esterces*—Sath =			
p-as- t	7	16	3
Decem Sestertium, 10,000 SEsterces—Ses-			
byth = pei-d-s	78	2	-6
Decies Sestertium, or 1,000,000 SESTERCES			
-Sestera $m = oikbe-h$	7812	10	0
2 Victoriati—Vid 4 SestertiiSef			
4 SestertiiSef			
Dani (211) 6 OBoli—Obs			
DENarius $(7\frac{1}{2}d.) = \begin{cases} 6 \text{ OBoli} - \text{Obs} \\ 10 \text{ LIBellæ} - \text{Líbaz} \end{cases}$			
20 Sembellæ—Semdy			
40 TERUNCII—Terunf	1		
			C

Den (doi,re)=Vid=Sef=Obs=Libaz=Sem dy=Terunfy.

The Memorial Lines.

At-ta= $manz=ez\acute{a}u \cdot su$, A-m=drag=t-ei-n, Hé-t=mily= $sh\acute{t}th=fuz$,

He-m=shauz=lou, Ba-t=eoz-be-s, Ba-to=teilz, A-to=tig, He-to=pegque,

A-d=dei,ro, He-d=dou, Ro-l=dous-li, Róm-ta=liboid-das,

Al-drach=sa-ds, Ita-mi=lt, Shek=béd=si, R6-d=seso=doi.re.

Ses=da-fi,re, Sath=p-as-t, Sesbyth=pei-d-s, Sesteram =oikbe-h,

Den (doi,re)=Vid=Sef=Obs=Libaz=Sem dy=Terunfy.

^{*} Dr. Arbuthnot makes the Sesterce a penny three farthings, and three-fourths of a farthing—Ses=da-fi,lro; according to which a S-esternium, or 1000 Sesterces, will be Sl. Is, $5\frac{1}{2}d$.—Sath=k-a-l-i; Decies Sestertium, or 1,000,000 of Sesterces = 8072l. 18s. 4d.—Setdm=kype-sak-do.

 $[\]mathbf{Tal} = \mathbf{D}auth = \mathbf{S} \dot{e}sdo = \mathbf{1}aeip-h, \mathbf{S}ath = k-a-l-h, \mathbf{S}est \hat{a}m = kype-sak\cdot \mathbf{d}o.$

TABLE II.

MEASURES OF LENGTH.

THE method observed in the following tables is, first, to give the ancient measures, weights, &c. in the proportions which they bear to each other; and then the proportions which they bear to those of our own country. To which I subjoin some tables, by which the reader will be enabled to make any calculations of this kind with the utmost ease and readiness.

ENGLISH MEASURES OF LENGTH.

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\text{English Mile} = \begin{cases} 8 \text{ FuRlongs} - \text{Fur}h \\ 320 \text{ P-oles} - \text{P}idz \\ 1,760 \text{ YARds} - \text{Yarapauz} \\ 5,280 \text{ F-eet} - \text{F}udeiz \\ 63,360 \text{ Inches} - \text{Inautisy} \\ 190,080 \text{ B-arley corns} - \text{Banzyeiz} \end{cases}
```

Mil = Furk = Pidz = Yarapauz = Fudeiz = Inautisy = Banzyeiz.

```
MILE (=8 furlongs) = 5280—Mil=Fudeiz.

Furlong (=40 poles) = 660—Fur=Fsauz.

Pole (=5\frac{1}{2} yards) = 16\frac{1}{2}—Pol=Fas,re.

Cubit (=2 spans) = 1\frac{1}{2}—Cub=Fa,re.

FAThom (=2 yards) = 6—Fat=Fau.

Mil=Fudeiz, Fur=Fsauz, Pol=Fas,re, Cub=Fa,re

Fat=Fau.
```

GRECIAN MEASURES OF LENGTH.

$$\begin{split} \mathbf{M} \hat{\imath} \lambda \cdot \imath \circ \nu &= \begin{cases} 8 \ \Sigma \tau \hat{a} - \delta \imath \alpha - \Sigma \tau \hat{a} k \\ 800 \ \mathsf{Op} \gamma - \nu \imath \alpha \mathbf{i} - \mathsf{Op} e ig \\ 4800 \ \mathsf{H} \hat{o} \hat{o} - \epsilon_{\mathsf{S}} - \mathsf{H} \hat{o} \hat{o} \hat{f} e ig \end{cases} \\ \mathbf{H} \hat{\eta} \chi - \nu_{\mathsf{S}} &= 2 \ \Sigma \pi \imath \theta \alpha \mu \tau \alpha \mathbf{i} . \\ \mathbf{H} \hat{o} \hat{\nu}_{\mathsf{S}} &= 4 \ \Delta \tilde{\omega} \rho - \alpha = 16 \ \Delta \hat{q} \times \tau - \nu \mathcal{I} \circ \iota . \end{cases}$$

 $Mίλ = Στάk = ^{2}Oρeig = Πόδfeig.$ Πῆχ = Σπιθαμε. Ποῦς = Δῶρο = Δάκταs.

†Δάκ-τυλοι. $\Pi \tilde{\eta} \chi - \nu_{\mathcal{G}} (=2 \Sigma \pi \iota \theta \alpha \mu \alpha \iota)$ $24 - \Pi \tilde{\eta} \chi = \Delta e f$ $\Pi \nu \gamma \dot{\omega} \nu \ (=2 \ \Lambda i \gamma \alpha \iota)$ $20 - \Pi v \gamma \dot{\omega} v = \Delta e z$ = $\Pi \nu \gamma - \mu \dot{\eta} = 1 \frac{1}{2} \sum_{\pi} \iota \theta \alpha \mu \dot{\eta}$ = $18 - \Pi v \gamma = \Delta a k$ $1 \Pi \tilde{\omega} \tilde{\varphi} (=4 \Delta \tilde{\omega} \rho \alpha)$ $16 - \Pi_0 \tilde{v}_S = \Delta \acute{a}_{KT} as$ $\Sigma \pi \iota \theta \alpha - \mu \dot{\eta} (=3 \Lambda \tilde{\omega} \rho \alpha)$ $12-\Sigma\pi\iota\theta\alpha=\Delta ad$ 'Ορθ-ύδωρον 11—' $O\rho\theta = \Delta ab$ $10 - \Lambda i_{\chi} = \Delta a \kappa b y$ Λίχ-ας 5Δῶ-ρον $4 - \Delta \tilde{\omega} = \Delta \dot{\alpha} \kappa \tau 0$

Στάδι = Παυg & 'Οργ = Παυ: Πῆχ = Δef , Πυγ = Δak que Πυγων= Δez , Ποῦς = Δak ταs, $\Sigma \pi \iota \theta a = \Delta ad$, 'Ορθ = Δab , $\Lambda \iota \chi = \Delta ak by$, $\Delta \tilde{\omega} = \Delta ak \tau o$.

t The Grecian foot was also, like the Roman, divided into 12

Οὐγγίαι or inches.

^{*} Called also Αὐλὸς, from whence came Δίαυλος, a space of two stadia.

⁺ The Grecian measures, from which the Romans borrowed theirs, were commonly taken from the members of a human body. $\Delta \Delta \kappa \tau \nu \lambda o$., a finger's breadth; $\Delta \hat{\omega} \rho \nu \nu$, a hand's breadth, or four fingers; $\Delta (\chi \alpha s)$, from the thumb to the middle finger; $O\rho\theta\delta\delta\omega\rho \nu \nu$, the length of the hand, from the upper part to the extremity of the longest finger; $\Xi \kappa i \theta a \mu \dot{\rho}$, the length of the hand extended, between the thumb and the little finger; $\Pi \nu \hat{\nu} s$, the foot—four hands' breadth; $\Pi \hat{\nu} \chi \nu s$, from the elbow to the extremity of the fingers; $\Pi \nu \gamma \nu \nu \nu$, from the elbow to the second joint of the fingers, or a cubit with the fingers inflected; $\Pi \nu \gamma \mu \dot{\nu}$, from the elbow, with the fingers quite clasped; $O\rho \gamma \nu \dot{\alpha}$, from the extremity of one middle finger to the extremity of the other, the arms being extended.

 $[\]hat{\mathbf{y}}$ $\Delta\hat{\omega}\rho\rho\nu$, the palm, so called, because gifts are made with the hand: called also $\Delta o\chi\mu\eta$, from δέχομαι, to receive, $\Delta \alpha\kappa\tau\nu\lambda$ οδόχμη. & Παλαιστή.

ROMAN MEASURES OF LENGTH.

```
\begin{aligned} \text{Milliare} &= \begin{cases} 8 \text{ STAdia} \text{—Sta}k \\ 1000 \text{ P-assus} \text{—Path} \\ 4000 \text{ PALMiPedes} \text{—Palmpoth} \\ 5000 \text{ P-edes} \text{—Puth} \end{cases} \\ \text{PES} &= \begin{cases} 4 \text{ PALmi MINores} \text{—Pal-mino} \\ 12 \text{ Unciae} \text{—Uncad} \\ 16 \text{ Digiti} \text{—Digitas} \end{cases} \end{aligned}
```

Mil=Stak=Path=Palmpoth. Pes=Pal-mino=Digitas = Uncad.

MILliare (=8 stadia) = 5000 — Mil-rom=Puth STADIum (=125 passus) = 625 — Stadi=Psel Passus (=4 palmipedes) = 5 — Pass=Pu DIGITI: † CUBitus (= $1\frac{1}{2}$ pes = 24 — Cub=Digitef PALMIPes (=5 palmi) = 20 — PalmipeDez † PEs (=4 palmi) = 16 — Pes=Das † PALMus (=3 unciæ) = 4 — Palm=Do $1\frac{1}{2}$ — Un=Dayre

Mil-rom=Puth, Stadi=Psel, Pass=Pu: Cub=Digitef, Palmip=Dez, Pes=Das, Palm=Do, Un=Da,re, ——

JEWISH MEASURES OF LENGTH.

$$\begin{array}{ll} \text{Mile} = \left\{ \begin{array}{l} 2 \text{ SABbATh-days' journeys-Sábate} \\ 10 \text{ STadia-Staz} \\ 4000 \text{ CUBITS-Cubitoth} \\ 2 \text{ SPANs the greater} \\ 3 \text{ SPANs the less} \\ 6 \text{ PALMs-Palmau} \\ 24 \text{ Digits-Digitef} \end{array} \right\} \text{--Spanë-i} \end{array}$$

^{*} Some divide the Digitus into 4 Grana.

[†] Some use Ulna for Cubitus. Pliny takes them for different measures; his Ulna answers to the Greek 'Οργνιά.

[‡] Pes was divided, as the As, into 12 parts; hence Dextans = 10 inches, Dodrans = 9 inches, &c.

[§] Called Palmus minor, to distinguish it from a greater, which some authors make equal to 12 digits.

[|] Called sometimes Pollex.

Cub=Spanë-i=Palmau=Digitef. Mil=Sabate=Staz=Coth

CUBITS. = 4000-Mil=Coth Eastern Mile (=10 stadia) 400-Stad=Cubitog STADium 80-Schen=eiz *SCHENUS, or Chebal 8-Ara-pol=kARAbian Pole 6—Eze-ree=s Ezekiel's REEd, or Kanch 4-Fath=0FATHOM DIGITS. 24-Cub=Digitef CuBit, or Ammah =

CUBit, or Ammah = 24—Cub=Digitef †SPAN, or Zereth = 12—Span=Dad PALM, or Tophach = 4—Palm=Do

- Mil=Coth,

Stad = Cubitog, Schen = eiz, Ara-pol = k, Eze-ree = s, Fath=o: Span=Dad, Cub=Digitef, Palm-Do: Para=Milt. ——

N. B. The PARAsang is a Persian measure, consisting of 30 stadia=3 MILES—Para=Milt.

A day's journey is an uncertain measure, but amongst the Jews was generally reckoned 24 miles.

The Memorial Lines.

Mil = Furk = Pidz = Yarapauz = Fudeiz = Inautisy = Banzyeiz.

Mil = Fudeiz, Fur = Fsauz, Pol = Fas, re, Cub = Fa, re, Fat = Fau.

 $Mi\lambda = \Sigma \tau dk = O\rho eig = \Pi \delta \delta f eig.$ $\Pi \tilde{\eta} \chi = \Sigma \pi \iota \theta a \mu e.$ $\Pi o \tilde{v}_{\mathcal{S}} = \Delta \tilde{\omega} \rho o$ $= \Delta \tilde{\omega} \kappa \tau a s,$

 $Στάδι = \Pi aug & Oογ = \Pi au$: Πῆχ = Δef, $\Pi υγ = Δak$ que $\Pi υγων = Δez$,

Ποῦς=Δάκταs, Σπιθα=Δαd, Ορθ=Δab, Λιχ=Δάκby, Δῶ=Δάκτο.

Mil=Stak=Path=Palmpoth, Pes=Pal-mino=Digitas=Uncad.

* Called al Pathil.

[†] There is likewise another word, Gomed, which the LXX. render Σπιθαμή.

Mil-rom=Puth, Stadi=Psel, Pass=Pu: Cub=Digitef, Palmip=Dez, Pes=Dus, Palm=Do, Un=Da,re. ——

Cub=Spanë-i=Palmau=Digitef. Mil=Sábate=Staz=Coth.

---Mil=Coth,

Stad = Cubitog, Schen = eiz, Ara-pol = k, Eze-ree = s, Fath=o: Span=Dad, Cub=Digitef, Palm=Do: Para=Milt. —

TABLE III.

THE PROPORTION OF THE FOREGOING MEASURES TO ENGLISH
MEASURES.

ALLIE CREES					
				In.	decimals.
Grecian D-igit—Gré-d=.pulo.				0	·75546875
Roman D-igit—Ro-d=,peldu .				0	·72525
*Jewish D-igit—Jew-d=,nad .				0	.912
				Feet	, decimals.
Grecian F-oot—Gre-f=a,zypdou				i	·00729±
Roman F-oot—Ro-f=,naup .				0	.967
Hebrew C-ubit— $H\acute{e}\cdot c=a,kef$.				1	·824
GREcian C-ubit—Gre-c=a,laznil				1	•510935
Roman C-ubit—Ro-c=b,olzu.				1	4505
				ln.	decimals.
GREcian Foot-Grec-fo=be,zeipu				12	.0875
Roman F-oot—Rom-f=ab,syf.				11	604
Hebrew C-ubit—He-c=da,keik				21	·888·
GREcian C-ubit - Gre-c=bei,bib				18	·13125
Roman C-ubit—Ro-c=boi, fys .				17	·406
3 3		En	g.	Miles	. decimals.
+GREcian M-iles-Gre-m=,pautze	oun				·763099

^{*} In reducing the Jewish Measures, I have followed Bishop Cumberland, who makes the cubit = 21.888 inches. Dr. Arbuthnot thinks it plain that there were two sorts of cubits, the sacred one and the profane or common one; the former exceeding the latter by a hand's breadth, or three inches. The profane cubit he makes equal to 17.82 inches; the sacred one = 20.79 inches.

+ Dr. Arbuthnot makes the Grecian mile equal to 805,8½ English paces; which, agreeably to my own method, I have here reduced

So Fort dec

	En	g. N	liles	. decimals.
Roman M-ile-Rom-m=,nalpan .			0	915719
HEBrew MILE—Heb-mil=a, teiboi .			1	·3817
GREcian Stadium-Gre-st=,zoutleip			0	$093587\frac{3}{8}$
Roman Stadium-Ro-st=,bafos .				
HEbrew StadiumHe-st=,bik	٠	•	0	·13817

The Memorial Lines.

Gré-d=,pulo, Ro-d=,peldu, Jew-d=,nad: Ro-f=,naup, Gre-f=a,zypdou,

Ro-c=b,olzn, He-c=a,kef, Gre-c=a,laznil: Grec-fo=be,zeipu,

Rom-f=ab-suf: Gre-m=,pantz, Rom-m=,nalpan, Heb-mil=a.teiboi:

He-c=da-keik, Ro-c=boi-fys, Gre-c=bei-bib: Ro-st=,bafos, He-st=,bik,

Gre-st=,zoutleip. ---

TABLE IV.

SUPERFICIAL MEASURES.

			esq. recet, nec.
English Acre—Ac=s-fotlauz			43560 00
R-ood (=40 poles)—R=azkouz .			10890 .00
Pole-Pol-doid,el			$272 \cdot 25$
			Sq. YARds.
Acre—Ac=Yarokoz			
			Feet, decimals.
Roman Square F-oot-Ro-fq=nil	•		0 .935089
Grecian Sq. F-oot—Gre-fq=á-zaj	fauts		1 '0146365
Hebrew Squ. C-ubit—He-cq=i,te	snois		3 ·326976
Jugerum=R-oods 2, P-oles 18,	F-ee	t 25	0.05—Jug=
Ré-Pak-Fely-zu			
Πλέθ-ρον=P-oles 36, F-eet 245—I	$1\lambda \epsilon \theta =$	Pis-	$\cdot \mathbf{F} dol$

to 0.763099 of a mile. Yet, according to his own computation, which makes 'Oργνιλ =6 feet 0.525 inches, or, which is the same. 6.04375 feet, Στάδιον (= 100 'Oργνιλ) will be 604:375 feet, and Mλιον (= S Στάδια) will be 4835 feet, exactly equal to the number of English feet in a Roman mile = 0.915719 of a mile,

*Egyptian "Aρου-ρα=R-oods "Aρου=Ri-Pe-Ful.ro.	3,	P-oles	2,	F-eet	$55\frac{1}{4}$ —
---	----	--------	----	-------	-------------------

			En	g. Acres.	decimals.
Jugerum-Jug=,sakdo .					618240
$\Pi\lambda\dot{\epsilon}\theta$ - $\rho o \nu$ — $\Pi\lambda\dot{\epsilon}\theta$ =,etyst .				. 0 .	230632
Egyptian "Αρουρ-α-" Αρουρ=				. 0 .	763768
Greek				Eng. Sq.	F. decim.
$II\lambda \epsilon\theta\rho\sigma\nu = 10$,000	==		10,140	3650
$^{\prime\prime}$ Aρουρα $\frac{1}{2}$ Πλέθρον = 5,	,000	==		5,078	1825
Egyptian "Apovpa = 10,000					·7600
, ,	Ř	om. Sq. Fee	et.	Sq. F.	decim.
†Actus minimus 120 × 40	==	4,800	=	4,488	3 .4272
Actus Quadratus 120 × 120	=]	14,400	=	13,465	2816
Clima 60×60	=	3,600	=	3,366	3204
Versus 100 × 100	= 1	10,000	=	9,350	•8900
‡Jugerum=2 Actus Quad.	= 2	28,800	=	26,930	•5632
Uncia 1 of the Jugerum	=	2,400	=	2,244	2136

The Memorial Lines.

Ac=s-fotlauz, R=azkouz, Pol=doid,el; Ac=Yarokozque; Gre-fq=a,zafauts, Ro-fq=nil, He-cq=i,tésnois. — Jug=Ré-Pak-Fely,zu, $\Pi\lambda \epsilon \theta$ =Pís-Fdol, "A ρ ov=Ri-Pe-Ful,ro. Jug= $_s$ akdo, $\Pi\lambda \epsilon \theta$ = $_s$ ctyst, "A ρ ov ρ = $_s$ oist. —

TABLE V.

MEASURES OF CAPACITY.

ENGLISH WINE MEASURE.

 $T_{\rm UN} = \begin{cases} 2 & \text{B-uts--Be} \\ 3 & \text{Puncheons--Pur} \\ 4 & \text{Hogsheads--Hof} \\ 6 & \text{Tierces--Tiers} \end{cases}$

The Grecian Αρουρα was ½ of the Πλέθρον.

[†] Actus is the length of one furrow, so far as a plough goes before it turns, in length 120 feet.

The Jugerum was divided, like the As, into twelve parts.

Tun=

14 R-undlets—Raf

252 GALlons—Galdud

2,016 Pints—Pidzas

58,212 Solid Inches—Inukdad

Tun=Be=Put=Hof=Tiers=Bark=Raf=Galdud=Pidzas=Inukdad.

ENGLISH CORN MEASURE.

$$\begin{aligned} \mathbf{Quarter=8} & \ \mathbf{Bushels-Quar=Bus} k \\ \mathbf{Bushel} &= \begin{cases} 4 & \mathbf{Pecks-Peco} \\ 8 & \mathbf{Gallons-Gal} k \\ 64 & \mathbf{Pints-Pinso} \end{cases}$$

Bush=Peco=Galk=Pinso: Quar=Busk

		Cul	ic Inches.
GALLON of W-ine—Gall-w=eta			231
*Gallon of C-orn—Gal-e=doid,ro			$272\frac{1}{4}$
PINT DRy measure—Pin-dr=if,rid			$34_{3^{\frac{1}{2}}}$
PINT LIQUID measure—Pin-liquid=ek,prei			28%
Hogshand - 63 GALlons-Galsi			
$Hogshead = \begin{cases} 63 \text{ GALlous-Galsi} \\ 504 \text{ PINts-Pinúzo} \end{cases}$			
Call sty Cal and side Din Anni Caid	T):	1	

Gáll-w=eta, Gal-c=doid, ro, Pin-dr=if, rid, Pin-liquid= ek, prei. Hog=Galsi=Pinúzo.

$$\begin{split} \mathrm{M}\epsilon\tau-\rho\eta\tau\dot{\eta}\varsigma &= \left\{ \begin{array}{l} 12 \ \mathrm{X}-\dot{\delta}\epsilon\varsigma - \mathrm{X}\acute{a}d \\ 72 \ \mathcal{Z}-\dot{\epsilon}\sigma\tau a\iota - \mathcal{Z}oid \\ 144 \ \mathrm{K}\sigma\tau\dot{\delta}\lambda-\hat{a}\iota - \mathrm{K}\sigma\tau\dot{\delta}\lambda aff \\ 48 \ \mathrm{X}o\iota\nu-\iota\kappa\dot{\epsilon}\varsigma - \mathrm{X}o\iota\nuok \\ 72 \ \mathcal{Z}\acute{\epsilon}\sigma\tau-a\iota - \mathcal{Z}\acute{\epsilon}\sigma\tau\rhoe \\ 144 \ \mathrm{K}\sigma\tau\dot{\delta}\lambda-a\iota - \mathrm{K}\sigma\tau\dot{\delta}\lambda aff \\ \end{array} \right. \end{split}$$

^{*} This is the common received content of a corn gallon, and according to which the following computations are made; but strictly, by Act of Parliament, the corn gailon contains but 268-8 cubic inches. By experiment it appears also, that the standard wine gallon doth contain but 224 cubic inches. - See Ward's Mathematician's Guide, Part I. Chap. 3.

 $Mετ=X\acute{a}d=\Xi oid=Koτ\acute{b}\lambda aff$, $M\acute{e}\eth=Xoινok=\Xi \acute{e}\sigma \tau peque=Koτ\acute{b}\lambda aff$.

 $\Xi \acute{\epsilon} \sigma \tau - \eta_{S} = \begin{cases} 2 & Ko\tau \acute{\nu} \lambda - \alpha \iota - Ko\tau \acute{\nu} \lambda e \\ 8 & O \not \xi \acute{\nu} - \beta \alpha \phi \alpha - O \not \xi \acute{\nu} k \\ 12 & K \acute{\nu} \alpha \theta - o \iota - K \acute{\nu} \alpha \theta b e \\ 48 & M \acute{\nu} \sigma \tau \rho - \alpha - M \acute{\nu} \sigma \tau \rho o k \\ 120 & Ko \chi \lambda - \iota \acute{\alpha} \rho \iota \alpha - Ko \chi \lambda \alpha d z \end{cases}$

 Ξ έστ=Κοτύλε=Κοχλαdz='Οξύk=Κύαθbeque=Μύστροk.

Ξέστ-αι. $= 72 - M_{\epsilon\tau} = \Xi \dot{\epsilon} \sigma \tau o i d$ $= 6 - X_0 \tilde{v}_0 = \Xi a u$ $= 72 - M \dot{\epsilon} \partial_u = \Xi o i d$ *Μετ-ρητής Ι. (=12 Χόες) Χοῦς Ι. (=12 Κοτύλαι Médiu-vos d. = $1\frac{1}{2}$ —Xo $i\nu$ = Ξa , re Xoiv-iž d. Μύστρ-α. $=48-\Xi'_{\epsilon\sigma\tau}=M'_{\nu\sigma\tau\rho\sigma}$ Ξέστ-ης (=12 Κύαθοι) $= 24 - \text{Kor} \dot{\nu} = \text{Mef}$ $= 6 - \text{O}\xi \dot{\nu} \beta = \text{Mau}$ Κοτύ-λη (=6 Κύαθοι) 'Οξύβ-αφον (=3 Κόγχαι) = 4- $K\dot{\nu}a=Mo$ Κύα-θος (=5 Χῆμαι) $= 2-K\delta\gamma\chi-Me$ Κόγχ-η (=5 Κοχλιάρια)

 $M_{\varepsilon\tau}=\mathcal{Z}'_{\varepsilon\sigma\tau}oid$, $X_{0}\tilde{v}_{\varepsilon}=\mathbf{Z}au$, $M'_{\varepsilon}\tilde{c}_{\mu}=\mathbf{Z}oid$, $X_{0}\tilde{v}_{\nu}=\mathbf{Z}a$, re. $\mathcal{Z}'_{\varepsilon\sigma\tau}=M'_{\theta\sigma\tau}\rho_{\theta}k$, $K_{0}\tilde{\tau}'_{\theta}=Mef$, $O_{\varepsilon}'_{\theta}\beta=Mau$, $K'_{\theta}\alpha=Me$, K_{0}^{\prime} , A_{ε}^{\prime}

ROMAN MEASURES OF CAPACITY.

Cul=Amphez=Urnoz=Congbauz. —— Sext=Hemiue=Quartarf=Acetak=Cyathbeque=Liglok

Called also 'Αμφορεύς, and Κάδος.

N.B. 1. denotes measures for liquid things, d. measures for dry things; the rest are used as measures for both.

Culeus l. (=20 Amphoræ) = 960—Cul=Sexnauz

Amphora l. (=2 Urnæ) = 48—Amph=Sok

URNa l. (=4 Congii) = 24—Urn=Sextef

Congius l. = 6—Congi=Sau

Modius d. (=2 Semi-modii) = 16—Mod=Sas

SEXTARIUS (=2 Heminæ) = 43—Sext=Ligulok HEMINA (=2 Quartarii) = 24—Hemi=Lef QUARTARIUS (=2 Acetabula) = 12--Quart=Lad ACETABulum (= $1\frac{1}{2}$ Cyathus) = 6--Acetab=Lau CYATHUS = 4--Cyath=Lo

Cul=Sexnauz, Amph=Sok, Urn=Sextef, Congi=Sau, Mod=Sas.
Sext=Ligulok, Hemi=Lef, Quart=Lad, Acetab=Lau,

JEWISH MEASURES OF CAPACITY.

Cyath=Lo.

 $\text{BATH} = \left\{ \begin{array}{l} 3 \text{ Seahs-Seat} \\ 6 \text{ Hins-Hins} \\ 10 \text{ OMERS-Omeraz} \\ 18 \text{ C-abs--Cak} \\ 72 \text{ Logs--Logpe} \\ 96 \text{ Caphs--Caphnau} \\ 330 \text{ Gachals--Gachal} tiz \end{array} \right.$

Bath=Seat=Hins=Omeraz=Cak=Logpe=Caphnau=Gachaltiz.

BATHS or EPHahs.

CHOMER OF COTON = 10—Chom=Bath-Ephaz LETECH d. = 5—Let=Ephu

BATH or Ephah = 18—Bath-Eph=Cabak HIN l. ½ of Seah = 3—Hín=Cabi

SEAh = 6—Sea=Cabs

The HIN was=12 L-ogs=16 C-aplis l.—Hin=Lad=Cas. CAB=20 G-achals d.—Cab=Gcz. Omer or Gomer was a dry measure.

Chom = Bath-Ephaz, Let = Ephu, Bath-Eph = Cabak, Hin=Cabi, Sea=Cabs.

Hin=Lad=Cas, Cab=Gez. —

The Memorial Lines.

Tun=Be=Put=Hof=Tiers=Bark=Raf=Galdud=Pidzas=Inukdad.

Bush=Peco=Galk=Pinso: Quar=Bush: Hog=Galsi=Pinúzo.

Gáll-w=eta, Gal-c=doid,ro, Pin-dr=if,rid, Pin-liquid=eh,prei.

 $M_{\epsilon\tau} = X \acute{a} d = Z \acute{o} i d = K_{o\tau} \acute{b} \lambda a f f$, $M \acute{\epsilon} \grave{o} = X_{o\nu} o k = Z \acute{\epsilon} \sigma \tau p e q u e = K_{o\tau} \acute{b} \lambda a f f$.

 $\Xi \acute{\epsilon} \sigma \tau = Ko\tau \acute{\nu} \lambda e = Ko\chi \lambda a dz = O S \acute{\nu} k = K \acute{\nu} a \theta b e que = M \acute{\nu} \sigma \tau \rho o k$. $M \acute{\epsilon} \tau = \Xi \acute{\epsilon} \sigma \tau o i d$, $Xo \acute{\nu} c = \Xi a u$, $M \acute{\epsilon} \partial_{\iota} \mu = \Xi o i d$, $Xo \acute{\nu} v = \Xi a v e$.

 Ξ έστ=Μύστροk, Κοτ \dot{v} =Mef, Ὁξ \dot{v} β =Mau, Κ \dot{v} α =Mo, Κ \dot{v} γ χ =Me.

Cul=Amphez=Urnoz=Congbauz. —

Sext=Hemine=Quartarf=Acetak=Cyathbeque=Liglok. Cul=Sexnauz, Amph=Sok, Urn=Sextef, Congi=Sau, Mod=Sas.

Sext=Ligulok, Hemi-Lef, Quart=Lad, Acetab=Lau, Cyath=Lo.

Bath=Seat=Hins=Omeraz=Cak=Logpe=Caphnau=Gachaltiz.

Chom = Bath-Ephaz, Let = Ephu, Bath-Eph = Cabak, Hín=Cabi, Sea=Cabs.

Hin=Lad=Cas, Cab=Gez.

TABLE VI.

MEASURES OF CAPACITY REDUCED TO ENGLISH MEASURES.

A PINT DRY = 34.0312 Cubic inches
A PINT LIQUID = 28.875

- Pin-dr=if,zibe, Pin-liquid=ek,koil.

	DR	Y.					Pints. In. decim
W77/2 77/2							70 3 501
* $M \dot{\epsilon} \delta \iota \mu \nu - o \varsigma - M \dot{\epsilon} \delta \iota \mu \nu = o i z - t$				•		•	16 7 68
Modiebau-p .		•		•	•	•	51 12 107
Eрнаh—Eph=ub-ad		•	•	•	•	•	
Ξ έστ $-\eta$ ς $-\Xi$ έστ $=$ z - it		•	•	4	•	•	
SextArius - Sextar = a.		•	•	•	٠	•	1 0 48
CAB—Cab=d-ek			•	•	٠	٠	2 28 432
							•
L	IQ	UID.					Pints. In. decim.
ing \ M -oid an							82 19 ·626
$+M\epsilon\tau\rho$ - $\eta\tau\dot{\eta}\varsigma$ - $M\epsilon\tau\rho$ = eid - an					•		57 10 66
Amphora—Am=up-az .		•			•		
‡Bath—Bath=sy-bu			•	•	•	۰	60 15 2
75		•			•	٠	1 4 283
Sextarius—Sext=a-u		٠		•	٠		1 5 636
‡Log-Log=z-do	•		٠	٠	٠	•	0 24 2735
							Bush, decimals.
Mέδ-ιμνος-Mέδ=a,zous.					•		. 1 .09612
Modius-Mod=,elild.							. 0 .253525
		•	•	•			
Ephah Chomer \ -Eph=,kydott	i	•	•		•		. 0 .802433
Chomer							Gall, decimals,
$M\epsilon\tau\rho$ - $\eta\tau\dot{\eta}\varsigma$ - $M\epsilon\tau\rho$ = az , til .							. 10 . 335
Amphora—Amph=oi,apa	id						
BATH—Bath=p,laul							
Congius—Con=, kousteil.			•	·	Ť		
Conglus—Con—, Roustett	•	•	•	•	•	۰	. 0 000000
							Pints, decimals,
Ξ έστ-ης liquid— Ξ έστ= a,b	ok			•		۰	
Ξέ-στης dry—Ξέ=z,noif	•	•					. 0 .97447

^{*} Besides the Attic Medimnus, there was a Medimnus Georgicus, equal to 6 Roman Modii.

† The Metretes of Syria was equal to the Roman Congius =

7.171 pints.

[†] The Jewish measures are Lere, according to Bishop Cumberland, from the Rabbins: but Bishop Hooper, from Josephus, makes the Jewish Bath equal to the Attic Μετρητής, and consequently the Log equal to the Ξέστης. Dr. Arbuthnot has given us tables according to both, but seems to prefer Bishop Hooper's account to the other.

Cab=t, isd.

P'nts decimals

				-		. acciniais
Sextarius liquid—Sext=á,boulak	•			٠	1	.19518
SEXTARIUS dry—Sext=a,zafei .				٠	1	.0148
CAB liquid—Cab=t,isd					3	.36257
Cab dry—Cab= $e,k\acute{o}p$					2	84731
Log-Log=z,eif						
The Memorial L	ine	s.				
—— Pin-dr=if,zibe, Pin	n-li	qui	d=	ek-	koi	l.
M έδιμ $\nu = oiz$ - t , M od $i = bau$ - p , Ep						
Sextar= a , Cab= d - ek ,						
Bath=sy-bu, Μετρ=eid-an, Am=u	ip-c	ız,	Ξέ	στ=	=a	f, Sext
=a-u, $Log=z-do$,						
Eph=,kydoti, Mod=,elild, Μέδ=α	1,20	us,	$\Xi \acute{\epsilon}$	=z	,no	if, Cab
$=e,k\delta p$ que,						

Sext=\(\alpha\), boulak, Con=\(,\lambda\), bousteil, Sext=\(a\), zafei, Log=\(z\), eif.

Amph=oi, apad, Bath=p, laul, Mετρ=az, til, Ξέστ=a, bok,

TABLE VII.

WEIGHTS.

N. B. L or Li stands for Libra or pound, Oz. for ounce, Li-t Pound T-roy, L-avoir Pound AvoiRdupois.

A Pound T-roy=12 Ounces-Li-t=Ozad

An Ounce Troy=
$$\begin{cases} 8 & DRAms-Dráh \\ 24 & ScRuples-Scref \\ 20 & P-ennyweights-Pez \\ 480 & GRAins-Grafhy \end{cases}$$
*A Pound Avoirdupois=
$$\begin{cases} 16 & Ounces-Ozas \\ 256 & DRams-Drels \end{cases}$$

Lit=Ozad, Oz=Drák=Seref=Pez=Grafky, L-áv= Ozas, L-av = Drels.

[·] According to the proportion laid down by Mr. Greaves, viz. that the avoirdupois pound is to the troy pound as 175 to 144; in Dr. Arbuthnot's tables it is as 17 to 14, which is a very inconsiderable difference, being but $4\frac{9}{7}$ grains less in the pound.

PONDERA, NUMMI, MENSURÆ. 113
Pound T-roy—Li-t=Grupauz .5760 Ounce Troy—Oz=oky .480 DRam—Dr=auz .60 PENnyweight—Pen=Gref .24 SCRUPle—Scrup=dy .20 *Pound Avoirdupois—L-av=oith .7000 Ounce Avoirdupois—Oz-av=otoi,l .437.5
Li-t=Grupauz, Oz=oky, Dr=auz, Pen=Gref, Scrup =dy, L-av=oithque, Oz-av=otoi,l.—
A-ttic T-alent = \[\begin{array}{lll} \text{60 M-inas} & \text{Mauz} \\ \text{6000 Drachms} & \text{Drauth} \\ \text{Bername} & \text{3000 Shekels} & \text{Shith} \\ \text{60 M-anehs} & \text{Mauz} \\ \text{2 Bekahs} & \text{Beke} \\ \text{4 Zuzas} & \text{Zuf} \\ \text{20 G-erahs} & \text{Gez} \end{array} \]
A-t=Mauz=Drauth; He-t=Shith, He-t-pond=Mauz; Shek=Beke=Zuf=Gez. ROMAN AND GRECIAN LESSER WEIGHTS.
LIBra = 12 Unciæ—Lib = Unad 3 DUELlæ — Duelt 4 SICILICI—Sicilo 6 SEXTULæ—Ses 8 DRACHMæ—Drak 7 SCRIPTULa—Script 6 OBoli—Obs 18 SILiquæ—Silak 72 Granea vel Lentes—Groid
T :1. TT ?

Lib=Unad, —— Un=Duelt=Sicilo=Ses=Drak, Drach=Script=Silak= Obs=Groid.

^{*} Mr. Ward says, that, by a very nice experiment, he found that one pound avoirdupois is equal to 14 ounces 11 penny-weights and 15½ grains troy, which is 6999½ grains; differing but half a grain in the pound from Mr. Greaves.—Mathematician's Guide, part i. chap. 3.

										(FRAI	na X	ιτάρ	ia.
Libra Λίτρ	a—L	ib = 0	Gr	asi	iad								69	12
Uncia Ov	γγία-	-Un	c=	= <i>la</i>	is								5	76
*Drachm	ια Δρο	ιχμὴ		Dr	ach	m=	oid	٠						72
SCRUPULI								•						24
†OBOLus									٠					12
Siliqua Ka										٠				4
Lib=Gras Obol=a) =		·	Dra		ı=α	oid,	S	cru	pul	=	ef,
														,
As					Unc.		MIS			·			ι	nc.
DEUNX.			•			_	INC				:	•	•	5
Dextans							lens							4
Dodrans		•	•	•			Adr							
Bes			•	٠			XTa:							
SEPTUNX		•	•	•	17		i cia	113	•	•	٠	•	•	ī
SEPTUNX		•	•	•	- 4	01	vela	•	•	۰	•	•	•	1

As=deu-dex — dod-bes — septún-semi — quin-tri-qua sext-unc.

The Memorial Lines.

Lí-t=Ozad, Oz=Drák=Scref=Pez=Grafky, L-áv=Ozas, L-áv=Drels.

Li-t=Grupauz, Oz=oky, Dr=auz, Pen=Gref, Scrup=dy, L-av=oithque,

Oz-av=otoi.l. —

A-t=Mauz=Drauth; He-t=Shith, He-t-pond=Mauz: Shek=Beke=Zuf=Gez.

Lib=Unad, ---

Un=Duelt=Sicilo=Ses=Drak, Drach=Script=Silak= Obs=Graid.

+ The 'Oβ-oλos was divided into 6 Χαλ-κοί or Æreoli, and the Χαλκ-bs into 7 Λεπτ-α or Minuta-Oβ=Xαλs, Χαλκ=Λεπτοί.

^{*} N.B. The Romans divided their ounce into 7 denarii as well as 8 drachms; and since they reckoned their denarius equal to the Attic drachm, this will make the Attic weights 1/8 heavier than the correspondent Roman weights.

^{*} The Ἡμίωβολον, Ἡμίδραχμον, Δίδραχμον, &c. are evident from their names.

Lib=Grasnad, Unc=lois, Drachm=oid, Scrupul=ef, Obol =ad, Sil=f.

As=deu-dex — dod-bes — septún-semi — quin-tri-qua —

sext-unc.

TABLE VIII.

ANCIENT WEIGHTS REDUCED TO ENGLISH TROY WEIGHTS.

Roman Ounce—Rom-oz=fik 438 '00
SHEKel-Shek=ebou
*Roman D-rachm=Ro-d=uf,pu 54 .75
DenariusDen=se,loi 62 '57
†A-ttic D-rachm—A-d=sei, f 68 '4
lib. oz. p-w. gr.
Roman L-ibra—Ro- $l=az-an$ 0 10 19 0
Hebrew M-aneh—He-m=e-t-oi-be 2 3 7 12
Hebrew T-alent—He-t= $b\acute{a}f$ -yz-al 114 0 15 0
†Ancient Artic M-ina-At-m=a-d-u 1 2 5 0
Ancient Artic T-alent-At-t=pa-t 71 3 0 0

The Memorial Lines.

Rom-oz = fik, Shek = ebou, Ro-d = uf, pu, Den = se, loi, A-d=sei, f.

He-t= $b\acute{a}f$ -yz-al, Ro-l=az-an, He-m=e-t-oi-be, At-m=a-d-u At-t=pa-t.

* So Bishop Cumberland, from the Rabbinical accounts. But Bishop Hooper, from Philo and Josephus, makes it equal to the Attic Stater, or Tetradrachm=68.444, or 6744 grains.

† According to the weight of the standard mina of Solon, Bishop Hooper supposes, that whilst the money drachm fell gradually from 68.4 to 62.57 grains, the ponderal drachm continued still the same, which I have therefore here retained. Dr. Bernard lays the middle sort of Attic drachms at 66 grains, which (Table I.) are accordingly valued at 8½.1. But the weight of the Attic drachm, under the first Roman Emperors, and for some considerable time before, was about 62.57 grains; and upon this drachm, and the equality of it with the Roman denarius, most of the computations in classic authors are founded.

† The common Attic mina was supposed equal to 12½ Roman ounces. The mina medica was 16 Roman ounces, and exactly the

weight of our avoirdupois pound.

TABLE IX.

JEWISH AND ROMAN MONEY, ACCORDING TO BISHOP CUMBERLAND.

	1.	8,	d.
Hebrew M-ina—He-m=p-a-l	7	1	5
HEbrew T-alent—He-t=tút-ab-az-h	353	11	$10\frac{1}{2}$
Golden Darick=12 G-erahs—Dar=Gád			
=l a -d o	1	0	4
HEbrew T-alent of Gold (O-r)-He-to=			
ufoil-ba-p-h	5475	11	$7\frac{1}{2}$
Shek=sé-do,ro			$4\frac{1}{4}$
Silver Denarius—Den=doi-t	0	0	73
AssaRium=F-arthing and half—Assar=Fa	-h		_
A QUADrant=3 of a Farthing—Quád=iro			
A MITE=+ of a F-arthing—Mit=ri-F			
2 (2) 26 1 271			

The Memorial Lines.

He-m = p-a-l, He-t = $t\acute{u}t$ -ab-az-h, Dar = $G\acute{a}d$ = la-do, He-to=ufoil-ba-p-h, Shek= $s\acute{e}$ -do-ro, Den=doi-t, Assar=Fa-b Quád=iro

Mit=ri-F.

DECIMAL TABLES

FOR THE MORE EASY REDUCTION OF ANCIENT COINS, WEIGHTS,
AND MEASURES.

Those who understand decimal arithmetic will, I hope, excuse me, if, for the sake of such as are unacquainted therewith, I lay down two or three observations, in order to make the following tables more generally useful:

First, that the denominator of every decimal fraction is an unit, with as many ciphers as there are places of numbers in the fraction: thus '5 signifies $_{7}^{5}_{07}$, '05 signifies $_{7}^{5}_{07}$,

·005 signifies Too, &c.

Secondly, that the nine figures at the left hand of each of the tables may stand either for units, or, by the supposed addition of one, two, three, or more ciphers, for

tens, hundreds, thousands, &c.

Thirdly, that if the said nine figures are supposed to stand for one, two, three, four, &c., then the decimals stand as in the table: if for ten, twenty, thirty, forty, &c. or for one hundred, two hundred, &c. then, for every such supposed addition of a cipher, one figure in the place of decimals is to be added to the place of integers.

Thus a Jewish cubit is equal to 1 English foot and 824

thousandth parts of a foot.

1 cubit = 1 ·824 10 cubits = 18 ·24 100 cubits = 182 ·4 1000 cubits = 1824

If there are not places enough of decimals to answer, they must be supplied with ciphers:

Lib. decim.

Thus, 1 Attic talent = 206 ·25 10 Attic talents = 2062 ·5 100 Attic talents = 20625 1000 Attic talents = 206250 &c. But as the common computation in classic authors is by sesterces and drachms, I shall exemplify more particularly the foregoing observations in the two tables drawn up for them.

Sesterce=1d. 3f. $\frac{3}{4}$, in decimal fractions of a pound sterling = .00807291667 —Sest=zykypenassoi A-ttic D-rachm, or Roman denarius=7d. 3f., in decimal fractions of a pound sterling = .032291667—A-d=zidenassoi.

C to I 1 Sestertius,	Decem Sestertii or Nummi, Centum Sestertii. Centum Sestertii. Decem Sestertiia, or 1000 Sestertii. Decem Sestertia, or 10000 HS. Centum Sestertia, or 100000 HS. Decies Sestertium, or 1 Million HS. Milles Sestertium, or 100 Millions HS. Decies Millies, or 1000 Millions HS. Centies Millies, or 1000 Millions HS. Centies Millies, or 10000 Millions HS. Millies Willies, or 10000 Millions HS.	1 Drachm,	10 Drachms, © 160 Drachms, or 1 Mina. © 1600 Drachms, or 10 Mina. © 1000 Drachms, or 10 Mina. © 10 Myriads (= 1000 Dr.) or 1000 Mina. © 100 Myriads (= 10 Mill. Dr.) or 10000 Mina. © 1000 Myriads (= 10 Mill. Dr.) or 100000 Mina. © 1000 Myriads (= 10 Mill. Dr.) or 100000 Mina. © 1000 Myriads (= 10 Mill. Dr.) or 100000 Mina.
1	00807291667	1	
2	$\cdot 0 1 6 1 4 5 8 3 3 3 3$	2	064583333
3	$\cdot 0 2 4 2 1 8 7 5 0 0 0$	3	096875000
4 5	$\cdot 03229166667$	4	129166667
5	$\cdot 04036458333$	5	161458333
6	.04843750000	6	193750000
6 7	05651041667	7	226041667
8	$\cdot 0 6 4 5 8 3 3 3 3 3 3 3 3 3 3 3 3 3$	8	$\cdot 2 5 8 3 3 3 3 3 3 3 3 3 3 3 3 3$
9	$\cdot 0.7265625000$	9	290625000

According to the observations before laid down, it is evident that

1 Sestertium, or 1000 HS. = 008 ·07291667 2 Sestertia, or 2000 HS. = 016 ·14583333 3 Sestertia, or 3000 HS. = 024 ·21875 And so down to 9 sestertia; the three first figures of the table being integers, the rest decimals. So,

*Decies Sestertium, or 1 Mill. HS. = 8072 ·91667 Vicies, or 2 Million HS. = 16145 ·83333 Tricies, or 3 Million HS. = 24218 ·75 &cc

Hence the value of most of the sums mentioned in classic authors may be discovered from the tables at first sight; the rest by the help only of addition. Thus,

What is the value of the Centies Quinquagies HS?

Centies HS = $80729 \cdot 1667$ Quinquagies = $40364 \cdot 5833$ Centies Quinquagies = $121093 \cdot 75$

What is the value of 375 Attic Drachms?

300 Drachms = 9 ·6875 70 Drachms = 2 ·26041667 5 Drachms = 0 ·16145833 375 Drachms = 12 ·109375

What is the value of 51 Myriads of Drachms?

50 Myriads = 16145 ·83333 1 Myriad = 322 ·91667 51 Myriads = 16468 ·75

Note, That the table for drachms or denarii will also serve for minæ and for asses, remembering that a denarius is equal to 10 asses, and a mina to 100 drachms. Thus,

^{*} With the numeral adverb, Centeng Millia are always understood.

			decimals.
Æris (sc. Assium) Millia X.=1000 den.	=	32	291667
Æris Millia XXV.=2500 denarii	=	80	·72916
Æris Millia LXXV.=7500 denarii	=	242	1875

What has been already said will easily be applied to those which follow:

*Attic Drachm	*Attic Talent	†Attic Talent		
$=8\frac{3}{4}d.$	=206l. 5s.	=193l.15s.		
l. decim.	l. decim.	l. decnn.		
1 0 .034375	1 206 25	1 193 .75		
2 0 .068750	2 412 .50	2 387 50		
3 0 .103125	3 618 .75	3 581 25		
4 0 .137500	4 825 .00	4 775 .00		
5 0 .171875	5 1031 -25	5 968 75		
6 0 .206250	6 1237 .50	6 1162 .50		
7 0 .240625	7 1443 -75	7 1356 .25		
8 0 .275000	8 1650 .00	8 1550 .00		
9 0 .309375	9 1856 25	9 1743 .75		

1Shekel	‡Hebrew Talent	Heo. Tal. Gold
=2s.7d.	$=387l.\ 10s.$	=16 Tal. Silver.
L decim.	l. decim.	ī.
1 0 ·129166667	1 387 .5	1 6200
2 0 .258333333	2 775 .0	2 12400
3 0 .387500000	3 1162 .5	3 18600
4 0 .516666666	4 1550 0	4 24800
5 0 .645833333	5 1937 .5	5 31000
6 0 .775000000	6 2325 .0	6 37200
7 0 .904166666	7 2712 .5	7 43400
8 1 .033333333	8 3100 .0	8 49600
9 1 .162500000	9 3487 .5	9 55800

^{*} According to Dr. Bernard.

[†] According to Dr. Arbuthnot.

[†] The shekel is here valued equal to 4 Attic drachms, according to Josephus; and this valuation Dr. Arbuthnot has followed in his Dissertations, though his tables are according to Bishop Cumberland. The talent = 3000 shekels.

	Grecian Digit.	R	oman Di		Je		Digit.
	In. decim.		In. de	cim.		In.	decim.
1	0 .75546875	1	0 .72	2525	1	0	.912
2	1 '51093750	2	1 '45	050	2	1	·824
3	2 '26640625	3	2 .17	575	3	2	.736
4	3 .02187500	4	2 .90	100	4	3	·648
5	3 .77734375	5	3 '62	625	5	4	·560
6	4 '53281250	6	4 .35	150	6	5	.472
7	5 ·28828125	7	5 .07	675	7	6	·384
8	6 '04375000	8	5 .80	200	8	7	·296
9	6 ·79921875	9	6 .52	725	9	8	·208

Grecian	Foot.	loma	in Foot.	J.	ewish	Cubit.
Ft.	decim.	F	t, decim		Ft.	decim.
1 1 0	0729	0	1967	1	1	·824
2 2 0	1458	2 1	. 934	2	3	648
3 3 .0	2187	2	.901	3	5	.472
4 4 .0	2916 4	3	·868	4	7	.296
5 5 0	3645	4	·835	5	9	.120
6 6 0	4375	5	.802	6	11	944
7 7 .0	5104	6	·769	7	12	·768
8 8 .0	5833	7	·736	8	14	.592
9 9 0	6562	8	·703	9	16	·416

Roman Mile. Mile decim.	Jewish Mile. Mile decim,	Roman Sq. Ft. Sq. Ft. decim.
1 0 .915719	1 1 3817	1 0 .935089
2 1 .831438	2 2 .7634	2 1 .870178
3 2 .747157	3 4 .1451	3 2 .805267
4 3 .662876	4 5 .5268	4 3 .740356
5 4 .578595	5 6 .9085	5 4 .675445
6 5 .494314	6 8 2902	6 5 610534
7 6 410033	7 9 6719	7 6 .545623
8 7 325752	8 11 .0536	8 7 .480712
9 8 .241471	9 12 4353	9 8 415801

Grecian Sq. Foot.	Πλ έθρον. Acre decim,	Jugerum.
1 1 .0146365	1 0 -230632	1 0 .61824
2 2 .0292730	2 0 '461264	2 1 .23648
3 3 .0439095	3 0 .691896	3 1 .85472
4 4 .0585460	4 0 .922528	4 2 .47296
5 5 .0731825	5 1 .153160	5 3 .09120
6 6 .0878190	6 1 .383792	6 3 .71944
7 7 1024555	7 1 .614424	7 4 32768
8 8 1170920	8 1 .845056	8 4 .94592
9 9 1317285	9 2 .075688	9 5 .56416
·		

Egyptian "Αρουρα. Acre decim	Ξέστης dry. Pint decim.	Sextarius d'y. Pint decim.
1 0 .763768	1 0 .97447	1 1 1 10148
2 1 .527536	2 1 .94894	2 2 .0296
3 2 ·291304	3 2 .92341	3 3 .0444
4 3 .055072	4 3 .89788	4 4 .0592
5 3 .818840	5 4 87235	5 5 .0740
6 4 '582608	6 5 .84682	6 6 .0888
7 5 346376	7 6 82129	7 7 1036
8 6 110144	8 7 .79576	8 8 1184
9 6 .873912	9 8 .77023	9 9 1332

	Cab dry. Pint decim.	Medimn Bushel de		Modius.
1	3 .84731	1 1 .03	0612 1	0 .253525
2	7 .69462	2 2 19	9224 2	0 .507050
3	11 '54193	3 3 .28	3836	0 .760575
4	15 .38924	4 4 .38	3448 4	1 .014100
5	19 ·23655	5 5 48	3060 5	1 .267625
6	23 .08386	6 6 .5	7672 6	1 '521150
7	26 93117	7 7 .63	7284 7	1 .774675
8	30 .77848	8 8 .70	3896 8	2 .028200
9	34 .62579	9 9 .86	3508 9	2 *281725

Ephah.	Ξέστης liquid.	Sextarius Iiquid.
Bushel decim	Pints decim.	Pints decimi.
1 0 .802433*	1 1 ·1483	1 1 19518
2 1 '604867	2 2 2966	$2 \mid 2 \mid 39036$
3 2 407300	3 3 44449	3 3 58554
4 3 .209734	4 4 5932	4 4 .78072
5 4 .012168	5 5 .7415	5 5 97590
6 4 .814601	6 6 8898	6 7 .17108
7 5 .617035	7 8 .0381	7 8 36626
8 6 .419469	8 9 1864	8 9 56144
9 7 .221902	9 10 .3347	9 10 .75662
	•	•
Cab liquid.	Log.	Amphora.
Pints decim.	Pints decim.	Hhds. decim.
1 3 36257	1 0 .84064	1 0 113821
2 6 .72514	2 1 .68128	2 0 227642
3 10 .08771	3 2 .52192	3 0 .341463
4 13 45028	4 3 .36256	4 0 .455284
5 16 81285	$5 4 \cdot 20320$	5 0 .569105
6 20 -17542	6 5 '04384	6 0 .682926
7 23 .53799	7 5 .88448	7 0 .796747
8 26 90056	8 6 .72512	8 0 .910568
9 30 .26313	9 7 .56576	9 1 '024389
. (-
Metretes.	Bath.	Congius. †
Hhds. decim.	Hhds, decim,	Gall, decim.
1 0 .16404	1 0 ·114858	1 0 .896385
2 0 .32808	2 0 .229716	2 1 .792770
3 0 .49212	3 0 .344574	3 2 .689155
4 0 .65616	4 0 .459432	4 3 .585540
5 0 .82020	5 0 .574290	5 4 .481925
6 0 .98424	6 0 689148	6 5 .378310
7 1 ·14828	7 0 .804006	7 6 .274695
8 1 .31232	8 0 · · 918864	8 7 171080
9 1 .47636	9 1 .033722	9 8 .067465

^{*} The exact fraction is $602433\frac{1}{8}$. In the Jewish measures I have followed Bishop Cumberland. The Ephah, according to Josephus, = 10961 bushel, and the Cab = 3.874 pints; the Cab liquid = 4.5933 pints, the Log equal to the Attic $\Xi \epsilon \sigma \tau \eta s$, and the Bath equal to the Metretes.

⁺ Equal to the Metretes of Syria.

	a	
Attic Drachm	Shekel	Attic Drachm
=62.57 Gr.	=4 Att. Drachms.	==62·57 Gr.
Oz. decim.	Oz. decim.	lb. Trey decim.
1 0 .130215	1 0 . 52086	1 0 01085125
2 0 .260430	2 1 .04172	2 0 .02170250
3 0 .390645	3 1 .56258	3 0 .03255375
4 0 .520860	4 2 .08344	4 0 .04340500
5 0 .651075	5 2 .60430	5 0 .05425625
6 0 .781290	6 3 .12516	6 0 .06510750
7 0 .911505	7 3 .64602	7 0 .07595875
	8 4 '16688	8 0 .08681000
9 1 ·171935	9 4 .68774	9 0 .09766125
Shekel	Shekel	
=219 Gr. Troy.	=4 Att. Drachm.	Roman Libra.
lb. Troy. decim.	lb. Troy. decim.	lb. Troy. decim.
$1 \mid 0 \cdot 0380208 \frac{1}{3}$	1 0 .043405	1 0 9125
2 0 .07604163	2 0 .086810	2 1 .8250
3 0 .1140625	3 0 .130215	3 2 .7375
4 0 .15208331	4 0 .173620	4 3 .6500
5 0 .19010413	5 0 .217025	5 4 5625
6 0 .2281250	6 0 260430	6 5 4750
7 0 2661458	7 0 .303835	7 6 3875
8 0 .3041666 \$	8 0 347240	8 7 .3000
9 0 3421875	9'0 390645	9 8 .2125

MISCELLANEA.

SECTION VI.

THE PROPORTION OF THE DIAMETER TO THE CIRCUMFERENCE
OF A CIRCLE: THE AREA OF A CIRCLE AND ELLIPSIS: THE
SURFACE AND SOLIDITY OF A SPHERE.

Diameter: Periphery:: 7:22 [Di:peri::p:ed], or :: 113:355, or more exactly, the Diameter: Periphery:: 10.000,000:31.415,929.

Di : peri :: p : ed :: bat : ilu : Dia : priph :: azmíl : tu-fal-oudou.

According to Van Ceulen, who carried the proportion to six and thirty figures, which, in memory of so laborious a work, were engraven upon his tomb at St. Peter's, in Leyden, the Diameter: Periphery:: 2.

Quintil, Quadr. Tril, Bil. Mil. Uu. 6,28,318.530,717.958,647.692,528.676,655.930,576. s, ektak, wiz-pap, nuk-sóp, sne-lek, aúps-sul, ouiz-lois.

The Diameter multiplied by 3.1416 gives the Periphery [Diperi, bobs dat priph], consequently the periphery divided by 3.1416 gives the diameter.

The AREA of a circle is given by multiplying the

SQUARE of the D-iameter into 0.7854.

Datur Area Squa-d per y, peilo.

The Area likewise is given by multiplying the fourth part of the Diameter into the Periphery—Ar=redi+pe.

The Area of an Ellipsis is given by multiplying the rectangle of the Transverse and Conjugate Diameters into 0.7854.

Area fit Ellips. Dia-tran-con-duct. in y,peilo.

The Surface of a sphere is given by multiplying the Periphery into the D-iameter—Surf—pe+d.

The Surface of a sphere is also given by multiplying

the AREa of its largest circle into 4-Surf=are+o.

The Solidity of a Sphere is given by multiplying 4 of the Radius into the Surface—Sol-sphe=rirad+sur.

The Memorial Lines.

Di : peri :: p : ed :: bat : ilu. Dia : priph :: azmíl : ta fal-oudou.

s, ektak, uïz-pap, nuk-sóp, sne-lek, aúps-sul, ouïz-lois. Diperi,bobs dat Priph. datur Area squa-d per y,peilo.

Area fit Ellips. Dia-tran-con-duct. in y, peilo.

Ar=rodi+pe, Surf=pe+d, Surf=are+o, Sol-sphe=

THE QUANTITY OF VAPOURS RAISED OUT OF THE SEA, ESTIMATED BY DR. HALLEY.

The Mediterranean, supposed to be equal to 160 square Degrees, is computed to yield in vapour, per diem, 5280 Millions of T-ons—Med=dégbauz=lekymil-t.

The THAMES is computed to carry down in a day of 24 hours, into the sea, 20.300,000 Tons—Tham=ez-igthton.

The rivers (FLUVII) which run into the MEDIterranean, are computed to carry 1,827.000,000 T-ons, which is little more than 1 of what is raised in vapour—Fluv-Med = aképmil-t.

The Memorial Line.

 $\operatorname{Med} = \operatorname{dég} bavz = \operatorname{leky} \operatorname{mil}$ -t. Tham $= \operatorname{ez}$ -igthton. Fluv- $\operatorname{Med} = \operatorname{ak\'ep} \operatorname{mil}$ -t.

The computations are made thus:

By experiments it appears, that each SQUARE F-oot of the surface of water yields in vapour, per diem, HAlf a wine PINt—Squa-f=ha-pin.

Each space of four feet square (=16 SQUARE F-eet)

yields a GALlon-assqua-f=gal.

A MILE square, 6914 Tons-Mil=snafton.

A square Degree (of $69\frac{1}{2}$ English Miles) 33.000,000

Tons-Dég (misou) timton.

The Mediterranean=square 160 degrees=5,280.000,000 tons, as above.

The Memorial Line.

Squa-f=ha-pin, assqua-f=gal, Mil=snafton, D&g (misou) timton.

The quantity of water the Mediterranean receives from the rivers that fall into it, is estimated thus:

The most considerable rivers that run into the Mediterranean are the Ebro, the Rhone, the Tiber, the Po, the Nile, the Don or Tanais, the Danube, the Niester, the Nieper or Borysthenes. Each of these is supposed to carry down ten times as much water as the Thames: not that any of them is so great, but so to allow for the small rivers that run into that sea. Now the water of the Thames being computed at about 20.300,000 tons, as above, the nine rivers aforesaid each will amount to 203.000,000; in all, 1,827.000,000 T-ons.

The Memorial Lines.

Thám=ez-igth-t, Eb-Rho-Ti-Po, Nil-Don, Dan-Niest-Nieper-aképmil-t.

The water of the Thames is computed thus:

It is supposed to run at Kingston bridge, where the tide reaches not, at the rate of two miles an honr, which

is 48 miles in 24 hours; 48 Miles are equal to 48,480 Yards—Mifk=Yako-feiz; which, being multiplied by 300 Yards (the Profile of water at Kingston bridge, where it is supposed to be 100 yards broad and 3 deep), produces 25,344,000 cubic Y-ards of water—Yako-feiz per ig=Yél-tfoth; which are equal to 20.300,000 Tons—ez-igthton.

The Memorial Line.

Mifk=Yako-feiz (Kin-prig) Yako-feiz per ig=Yél-tfoth =ez-igthton.

THE VELOCITY OF SOUND, LIGHT, &c.

A cannon bullet (GLOBUS tormento bellico emissus) IN a Second, moves 204 YARds—In-sec Glob-yarezo.

Light (Lumen) in a second moves 200,000 MILES-

Lu-milegth.

Sound (Sonus) moves in a second 1142 feet (Pedes) —Son-ped-movetable.

A cannon bullet moves a M-ile in 17 Half Seconds-

Glob-m-ápha-sec.

Sound moves a mile in 9 half seconds 1-Sonn, ro.

A cannon builet would be in moving to the Sun (AD

Solem) 321 years—Ad-Sol-glob=án-te,re.

Sound would be in moving to the Sun 17 years—Sonap. The descent of heavy bodies (Descensus Gravium) is 16 F-eet $\frac{1}{12}$, or an inch, in a Second—Des-gravi-sec = Fas,rad; and in more seconds as the squares of those times.

A PENDULUM of 39 Inches 2 tenths [Pendulum Intou,d] oscillates or vibrates Seconds—Oscil-Sec-Pendulum-intou,d.

The Memorial Lines.

In-sec Glob-yarczo, Lu-milegth, Son-ped-movetabfe. Glob-m-ápha-sec, Soun, ro, Ad-sol-glob=án-te, re, Sonap, Des-gravi-sec=Fas, rad, Oscil-sec-Pendulum-intou.d.

THE JEWISH MONTHS.

Nisan or A	вір					*March
ZIF or J-air						
Sivan						May
THAMUZ.						
AB						
ELUL						August
TIZRI or ET	ΗE	oin	ı			September
Bul or M-es	rche	25V2	an			October
CHISLEU.						
THEbeth .						December
SHEBeth .						
Apar or Vea						

The Memorial Lines.

Nis-AbiMar, Zif-JAp, SiMa, ThámJun, AbJul, ElúlAug, Tizr-EtheSep, Bul-MOc, ChisleuN, TheDe, ShebJan & AdFeb.

THE GRECIAN MONTHS.

ΈΚατομβαιών						June
ΜΕΤΑΓΕΙ τνιών						July
ΒΟΗΔΡομιών					•	August
ΜΑΙμακτηριών			٠			September
ΠΥΑΝεψιών .	٠					<i>O</i> ctober
ΠΟΣειδεών .						November
ΓΑΜηλιών .	٠					$oldsymbol{Decem}$ ber
'ΑΝΘΕΣτηριών	٠					${\it Jan}$ uary
'ΕΛΑφηβολιών						February
ΜΟΥνυχιών .		٠		٠	٠	March
ΘΑΡΓΗΛιώι .				٠		April
ΣΚΙΡροφοριών				•		May

The Memorial Lines.

HecJu, MetageiJul, BoedrAug, MaiS, PúanO, PosNov, GamDecem, AnthesJan, ElaFeb, MouM, ThargelA, SkirMa.

^{• 1.} e. part of March and part of April, and so of the rest.

Note, That the Athenians began their year from the new moon, whose full was next after the summer solstice, which was at first reckoned to be upon the 8th of July, after on the 27th of June. Vide Beveregii Chron. Instit. lib. i. cap. 12.

JEWISH AND CHRISTIAN ERA OF THE CREATION.

Both Jewish and Christian writers make use of the era of the creation of the world; but there is great variety of opinions concerning the number of years between that and the birth of Christ. That which is most generally received is, that the first year of the vulgar Christian era commences from the day of his circumcision, viz. the first of January, in the year of the world 4004, and of the Julian period 4714. The Jews place the creation of the world later by about 243 years; and the Greek historians, upon the authority of the Septuagint, sooner by about 1490 or 1500 years; so that

Oct. 7 of the first year Aug. 27 began began the 5762d year of the Jewish era the 5494th of the Greek Ecclesiastical era		0	- 6.3		cul- ereal man of the					
hirst year Jewish era the 5494th of the Greek	0 .	ier.	of the	}						
	Oct.	7	first							
			vear		the 5494th of the GREek					
2. 25. 2.) of the 1 S 1 Ecclesiastical eta	Aug.	2 7 ·	of the	≻began ≺	Ecclesiastical era					
Christian the 5509th of the Greek			Christian		the 5509th of the GREEK					
Sept. 1 era Civil era	Sept.	1	era	Í I	Civil era					

The Memorial Line.

Christ=mundothf, Jud=ipaud, Grec-ecc=lonf, Grec-civil=ulzou.

THE DAYS* OF THE MONTH ON WHICH THE OTHER NOTED EPOCHAS BEGAN.

EPUCI	140	DI	u_{I}	74.0			
							Christ.
The destruction of TROY					June	16.	1183
†The first Olympiad .					June	19.	776
The building of Rome					Apri l	21.	753

^{*} For the years, see page 7.

[†] The last day of the Olympic games was upon the full moon immediately after the summer solstice.

Ounces Troy, decim.

					Bef. (Christ.
				${\bf F}eb.$	26.	747
				Nov.	12.	324
				Oct.	1.	312
ım				Sept.	2.	31
				-	An.	Dom.
				Aug.	29.	284
				July	16.	622
			•	June	16.	632
		 			Nov. Oct. m Sept	Feb. 26 Nov. 12 Oct. 1 Sept. 2.

The Memorial Lines.

Mund=Octoi, Oly-Jan, Phil-Nad, Nab-Fés, (bosa) Ro-pda, Yez-Troy-Jas, Maho-las, Dio-gen, Vict-Acta-Se, Con-ta.

THE SPECIFIC GRAVITIES OF SOME METALS AND OTHER BODIES.+

	rtFine Gold—Aur=az,iloud	=	10	·359273
Jo	Fine Silver—Arg=l,eil			·850035
	Our	ices A	Averd	l, decim.
inch	LeadPlum=s,lutkul			·553855
Ξ.	Common Iron—Fer=f,oden	=	4	1422979
cubic	Fine MARbleMar=b, laukk	=	1	•568859
E	Common Glass-Vitru=b,oniz		1	493037
V	Com. clear Water—Aqua=b,loiksoup			· 57 8697
4	Sound dry Oak-Robo=,lislaun	=	0	•536569
	Oil Olive—Ol-Ole=,lektuz	=	0	•528350

The Memorial Lines.

Aur=az,iloud, Arg=l,eil, Plum=s,lutkul, Fer=f,oden, Mar=b.laukk.

Vitru=b,oniz, Aqua=b,loiks, Robo=,lislaun, Ol-Ole=,lektuz.

+ See Ward's Mathematician's Guide, part i. chap. 10.

The Naconassarean years, not admitting any intercalary day, began, after every four years, a day sooner, and in 1461 years (bosa) went back throughout the whole Julian year, and began on the same day again.

[†] The beginning of the technical words is from the Latin word for each.

NUMERUS DIGNITATUM, &c. TEMPORE CAMDENI.

*Sunt in Anglia Decanatus 26, Archidiaconatus 60, Dignitates & Præbendæ 544, Ecclesiæ Parochiales 9284 e quibus 3845 sunt Appropriatæ. In libro tamen Thomæ Wolsæi Cardinalis descripto 1520, per comitatus numerantur ecclesiæ 9407.

The Memorial Line.

- Sunt Decanes, Archdauz, Præblof, Parochoudeif, Apprikfu.

THE TEMPLE OF THE EIGHT WINDS, MENTIONED IN DR. POTTER'S ARCHÆOLOGIA.

Εὖρος .			. Eurus S-outh E-ast.	
'ΑΠηλιώτης	ç		. Subsolanus E-ast.	
			. CECIAS N-orth E-ast	
Βορέας .			. Boreas N-orth.	
ΣΚΙρον .			. Corus North W-est	t.
Ζ-έφυρος			. O-ccidens W-est.	
Νότος .			. Noтus S-outh.	
			. Africus South W-est.	

The Memorial Line.

Cæci=NE, Σ_{Kt} -Cor=NoW, Eû=SE, Λ -Af=SoW, Bór=N, ' Λ =E, Not=S, Z-O=W.

ACCORDING TO AULUS GELLIUS, THE WINDS ARE THUS DISTINGUISHED:

Septentrio		. 'Απαρκτίας		North.
Eurus		. Subsolanus		East.
Auster		. Notus		South.
Favonius .		. Zephyrus .		West.
Boreas .		. Aquilo .		North East.
Vulturnus		. Euronotus		South East.
Caurus .		. 'Αργεςτής .		North West.
		. Libs		

[·] Camdeni Britannia, edit. Jans. p. 67.

ROMAN MILITIA.

A LEGION = 10 Cohorts.
A COHORT = 3 MANIPULIS.
A MANIPULIS = 2 ORdines.
A TURMA = 3 DECURIOS.

10 T-urmæ were the justus equitatus, or horse belonging to a Legion.

The Memorial Line.

Legi=Coaz, Coho-Mant, Manip=Ord, Turm=Décuri, Taz-Le.

ROMAN LAW.

Primus fundus Jurisprudentiæ Romanæ, Legum Regiarum fragmenta, (quæ a Sexto Papirio olim in unum corpus collecta fuerant) sc. trium Regum Romuli, Numæ et Servii Tullii; secundus, leges 12 Tabularum; tertius, Edictum Perpetuum quod (Adriani Imp. Authoritate) a Salvio Juliano conditum atque in titulos digestum.

Codex Justinianus compositus ex codicibus Gregoriano, Hermogeniano atque Theodosiano, novellisque post cos

positis constitutionibus.

Gregorianus et Hermogenianus nominantur ab authore. Prior codex ab A-driano ad Valerium latas leges continebat, secundus a Claudio ad Diocletianum; Theodosianus leges Constantini ad Theodosium. Novellæ a Theodosii temporibus ad Justinianum.

The Memorial Lines.

Leg-reg (Pap) Ro-Nu-Serv, Tabulad, Ed-perp (Adri) Salv-Jul.

Greg=A-Val, Herm=Clau-Di, Theo=Const-The, Nov =Theo-Justin.

The first Code of Justinian was published anno 529, the Digests anno 531, the Institute anno 533, the Second Code anno 534, the Novells from the year 535 to 558.

The Memorial Line.

Cod-prilen, Diglib, Instlit, Co-selif, Novelil-luk.

The bishops* who refused their assent to the $^{\prime}\mathrm{O}\mu oo\acute{v}\sigma iov$.

Eusebius, bishop of Nicomedia. Theognis, bishop of Nice. Maris, bishop of Chalcedon. Theonas, bishop of Marmarica. Secundus, bishop of Ptolemais.

The Memorial Line.

Eu-Nico, Theog-Ni, Mar-Chal, Sec-Ptol, Theo Marmar.

THE TEN PERS-ECUTIONS UNDER

NETO, Domitian, NERVA, ANTONINUS PIUS, SEVERUS, MAXIMIN, DECIUS, VALERIAN, AURELIAN, DIOCLESIAN.

The Memorial Line.

PERS = Ne-Do-Nerv-AntPi-Sev-Max-De-Val-Aure-Diocles.

THE ELECTORS OF GERMANY

Were the Archbishop of Mentz, Triers, and Cologne, Elector Palatine of the Rhine, the King of Bohemia, the Electors of Bavaria, Saxony, Brandenburg; the Elector of Hanover was added, Anno Dom. 1693.

The Memorial Line.

Men-Trí-Co-Rhin-Bohe-Bav-Sax-Branden; Hanover ad sout.

^{*} Ταύτην την πίστιν τριακόσιοι μέν πρὸς τοὺς δεκαοκτὼ, ἔγνωσάν τε καὶ ἔστερξαν' καὶ ὡς φησίν ὁ Εὐσέβιος, ὁμοφωνήσαντες καὶ ὁμοδοξήσαντες ἔγραφον' πέντε δὲ μόνοι οὐ προσεδέξαντο, τῆς λέξεως τοῦ ὁμοουσίου ἐπιλαβόμενοι. Εὐσέβιος ὁ Νικομεδείας, ζτ..-Socratis Historia Eccleviastica, lib. i. cap. 8.

THE QUINQUARTICULAR CONTROVERSY, CONCERNING

1. PREDEstination. 2. Free-will (LIBERUM Arbitrium). 3. The force of Divine Assistance (Auxilium). 4. Perseverance. 5. The extent of Redemption.

The Calvinian doctrine upon these points, handed from Geneva by the English refugees, and propagated by CARTwright in the Margaret professor's chair at Cambridge. was, at a consultation of several prelates and divines at Lambeth, digested into nine articles, commonly called the LAMBeth Arricles, and agreed upon N-ov. 10, 1595-Naz-aloul; but, by order of Queen Elizabeth, were immediately recalled and suppressed.

The Memorial Line.

Lamb-Art = Cart-Naz-aloul, Predés-Liber-Auxili-Pers-Red.

THE SEVEN PRECEPTS (SEPT-EM PRÆCEPT-A) OF THE SONS OF NOAH ARE RECORDED BY THE JEWISH DOCTORS UNDER THE FOLLOWING TITLES:

I. To worship the true God (Cultus divinus).

II. To renounce I Do Latry.

III. To commit no murder (Cædes).
IV. Not to be defiled with fornication, &c. (Stuprum).
V. To avoid all rapine, theft, &c. (Furtum).

VI. To administer justice (JUSTITIA).
VII. Not to eat the flesh with the blood (SANGUIS).

Such Gentiles as were admitted to the worship of the God of Israel, and the hope of a future life, but were not circumcised, nor yet conformed to the Mosaical rites, being only obliged to the observation of the foregoing precepts, were called proselytes of the gate, in opposition to the proselytes of righteousness, or of the covenant, who differed nothing from the Jews, but that they were of Gentile race. See Lewis's Hebrew Antiquities.

The Memorial Line.

SEPT-PRÆCEPT=Cul-Idol-Cæd-Stup-Furt-Jústiti-Sanguis.

MISNAH, GEMARAH, TALMUD.

The MISNAh in 6 B-ooks [Misna-bs] contained 63 Tracts [Traut], into which the traditions or oral law of the Jews were methodically digested by Rabbi Judáh HAKKADosh in the time of Antoninus P-ius-Hakad-AnP. As soon as it was published, it became the subject of the study of all their learned men, and the chiefest of them, both in Judæa and Babylonia, employed themselves to make comments upon it; and these, with the Misnah, make up both their Talmuds, i.e. the Jerusalem Talmud and the Babylonish Talmud. These comments are called the Gemarah or complement, the Misnah the text; both together the Talmud-Tal=Mis-Gema. The JERusalem Talmud was completed about A. D. 300-Tál-The B-abylonish TALmud about 500, or in the beginning of the sixth century—Tal-Buq. This latter is only in esteem among the Jews. See Prideaux's Connexion, p. 328.

The Memorial Line.

Misna-bs-Trant-Hakad-AnP, Tal=Mis Gema, Tál-Jerig, Tal-Bug.

CHARACTERS ARITHMETICI GRÆCI ET HEBRAICI.

Αδ-βέ-γι-δο ευ-σταυ ζοι-ηκ-θου-ια κέz-λι-μο νυ-ζαυ. Ορ-πεί δου ρά-σε-τί υf-φυ-χαυ, ψοι-ωμεί σανου. β-μέ-λί-πο πυ-ταυ τοί β του να β-μέ-λί-πο β-με-μεί γου β-μεί γου β-με-μεί β-με γου β-με γου β-με γου β-με γου β-με γου β-με γου β-μεί γου β-μ

The decads and hundreds will be easily distinguished from each other, and therefore only the first figure is added, bisc. b=3, i.e. 30; nesc. n=2, i.e. 200. Pronounce bou kopou, oarou sanpou, nf thauf, you tsadou.

THE AGES OF CHRISTIANITY AS DISTINGUISHED BY DR. CAVE, ACCORDING TO WHAT WAS MOST REMARKABLE IN EACH CENTURY.

> Cent I. Sæculum A Postolicum. II. Sæculum G-nosticum. Cent. Cent. III. Sæculum Novatianum. Cent. IV. Sæculum Arianum. Cent. V. Sæculum Nestorianum. Cent. VI. Sæculum Eutychicum.

Cent. VII. Sæculum Monotheliticum. Cent. VIII. Sæculum EIconiclasticum.

Cent. IX. Sæculum Photianum.

Cent. X. Sæculum Obscurum. Cent. XI. Sæculum Hildebrandinum.

Cent. XII. Sæculum WAldense. Cent. XIII. Sæculum Scholasticum.

Cent. XIV. Sæculum Wicklevianum. Cent. XV. Sæculum Synodale.

Cent. XVI. Szeculum R-eformatum.

The Memorial Line.

Ap-G-Nov Ari-Nest Eut-Monoth Eic-Phot-Ob Hil-Wa-Scho Wick-Sy-R.

THE DIVISION OF THE ROMAN EMPIRE OUT OF THE BOOK CALLED NOTITIA IMPERII, SAID TO BE WRITTEN ABOUT THE TIME OF ARCADIUS AND HONORIUS.

The whole empire was divided into 13 Dioceses, under 4 PRÆfecti Prætorio, and about 120 Provinces contained in them-Præf=dibi=pradz.

1. The Præfectus Prætorio ORientis, and under him five dioceses, viz. the Oniental, E-gyptian, Asiatic, Pon-

tic, and Thracian dioceses-Or=E-As-Po-Th.

2. The Præfectus Prætorio of Illyricum, and under him two dioceses, viz. Macedonia and D-acia-Ill=Ma-D.

3. The *Præfectus Prætorio* of Italy, and under him three dioceses, viz. Italy, Itlyricum, and Africa—It=It-Il-Af.

4. The Præfectus Prætorio G-alliarum, and under him three dioceses, viz. Hīspauia, Gallia, and B-ritannia—

G=His-Ga-B.

The Memorial Line.

Præf=dibi=pradz, Ill=Ma-D, Or=E-As-Po-Th, It= It-Il-Af, G=His-Ga-B.

THE DIMENSIONS OF THE ARK AND TEMPLE.

The length (Longitudo) of the ARK, 300 CUBits—Ark-lo-cubig; the Breadth 50 cubits; the height (Alti-

tudo) 30 cubits-Bruz-aliz.

The length of the Temple which King Solomon built for the Lord was 60 cubits, the Breadth thereof 20 cubits, and the height thereof 30 cubits (1 Kings vi. 2)—Temlónsy-brez-alty. The length of the Porch 20 cubits, the height thereof 120 cubits (2 Chron. iii. 4)—Porez-bez.

The Memorial Line.

Ark-lo-cubig-bruz-aliz, Tem-lonsy-brez-alty, Porez-bez.

COMPUTATION OF THE COST, VESSELS, VESTMENTS, &c. OF SOLOMON'S TEMPLE.

By Villalpandus's computation of the number of Talents of gold, silver, and brass, laid out upon the Temple, the sum amounts to 6904.822,500l. sterling—Tal-tem=souzo-ked-uq. And the jewels are reckoned to exceed this sum.

Vessels of gold (VASA AUREA) consecrated to the use of the Temple, are reckoned by Josephus 140,000—Vasaureabózth; which, according to Capel's reduction of the tables contained in them, amounts to 545,296,203 pounds sterling—lol-enáw-dyt.

The vessels of silver (VASA Argentea) 1.340,000 [Vasaratozth] are computed at 439.344,000l,—fin-tofth.

Priests' vestments of silk (Vestes Sericæ) 10,000-

Vest-sericazth.

P-urple vestments for singers 2.000,000—Pem; Trumpets 200,000—Tregth; other musical Instruments 40,000—Instroz.

Besides these charges, there was that of the other materials, and of 10,000 men per month in Lebanon to hew down timber (Sylvicidæ)—Silvicidæ. To carry burthens (Vectores) 70,000—Vectoiæ. To hew stones (Lapicidinæ) 80,000—Lapiky; and 3,300 overseers (Episcopi)—Episcoptig; who were all employed for 7 years (Annis Septem), to whom, besides their wages and diet, Solomon gave a free gift 6.733,977l. (Donum Solomonis)—s-paut-noip. The treasure left by David towards carrying on this work (Reliquit David) 911.416,207l.—nub-oás-dyp.

N.B. th is left out, as Sylvicidaz for Sylvicidazth, &c.

it being impossible to mistake 10,000 for 10.

The Memorial Lines.

Tal-tem=souzo-hed-ug, Vas-aureabozth=lol-enáu-dyt, Vas-áratozth=fin-tofth, Tregth, Instroz, Vest-sericáz, Pem. An-sept Sylvicidaz, Lapiky, Vectoiz, Episcoptig, Don-Solomo-s-paut-noip, reliquit Dav-nab-oás-dyp.

The number of those that returned (Reduces) from the captivity were 42,360—Redufe-tauz; besides ProseLytes 7,337—Proseloitip.

The particular sums in Ezra's Catalogue amount to

29,828 - Cat-Ezdou-kek.

The particular sums in Nehemiah's Catalogue, 31,031—Cat-Nehetazib. How these accounts are reconciled, see the Index to the Bible.

The Memorial Line.

Redufe-tauz-Proseloitip, Cat-Ezdou-kek, Cat-Nehetazib.

The Silver of them that were numbered of the Congregations was a hundred Talents, and a thousand seven

hundred and threescore and fifteen Shekels after the shekel of the sanctuary, a Bekah for every man, that is, half a shekel after the shekel of the sanctuary, for every one that went to be numbered, from twenty years old and upwards, for six hundred thousand and three thousand and five hundred and fifty men. Exod xxxviii. 25, 26.

The Memorial Line.

Sil=Con=Talg-shékapoil, Beksyt-luz=Shekelizappu.

DIFFERENCE OF TALENTS.

		Attic Minns	Attic Drachms.
4 0 1 m 1 1			
A Syrian Talent contained		. 15	1500
A PTOLEMaic Talent		. 20	2000
An Euboic Talent	,	. 60	6000
An Alexandrian Talent.		. 120	12000
An Antiochian Talent		. 60	6000
A larger ATTic Talent	٠	. 80	8000
A BABYLonish Talent		. 70	7000
An Æginean Talent		. 100	10000
*A Rhodian Talent		. 100	10000
A Tyrian Talent		. 80	8000
An Egyptian Talent		. 80	8000

The Memorial Lines.

Tal-Syr=Mal, Ptolem=ez, Eub=auz, Alexan=bez & Ant=auz,

Att-maj=eiz, Babyl=eiz, Ægin=ag, Rh=ag, Tyr-Egypt=eiz.

I shall conclude with two lines, just to show how, by this method, may be remembered the year and chapter of

^{*} According to some, the Rhodian talent contained but 4500 Attic drachms, and the Euboic but 4000. Vide Brerewood de Ponderibus et Pretiis, cap. 9.

any particular statute. Those to whom a hint of this nature may perhaps be thought useful, are best capable of applying and improving it as they shall see occasion.

An Act for prevention of FRAUDs and Perjuries, 29

CAROL. II. c. 3.—Fraud-Carolen-t.

An Act against abuses in presentation to benefices (Simony) 31 Eliz. c. 6.—Sim-Elib-s.

The Bill for first fruits (PRIMITIE) 26 H-en. VIII.

c. 3 .- Primit-Hes-t.

An Act for the dissolution of Monasteries.

The lesser 27 H.VIII. c. 28 The greater 31 H.VIII. c. 11 $\}$ —Monast-Hep-ek, ib-ba.

The Memorial Line.

Fraud Carolen-t, Sim-Elib s, Primit-Hes-t, Monast-Hep-ek, ib-ba.

To remember the several statutes relating to the same subject must needs be more difficult, as there is but one leading syllable for the whole line; but may be done in the following manner:

Some of the principal acts which relate to the poor (PAUPeres) are 43 ELiz. c. 2. 13, 14 CAR. II. c. 12. 3,4 William and M-ary, c. 11. 8,9 Will, III. c. 30. 9, 10 Will, III. c. 11 12 Ann, c. 18.

The Memorial Line.

Paup-Elot-e, Carat-ad, Wi-Mt-ab, Wilk-iz, n-ab, Anad-bei.

LOWE'S MNEMONICS.

DR. WATTS, in his Essay on the Improvement of the Mind, near the conclusion of the 17th chapter, where he more especially treats of Improving the Memory, makes

the following observation:

"Dr. Grey, in his book called Memoria Technica, has "exchanged the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, for "some consonants, b, d, t, f, l, s, p, k, n, z, and the "vowels a, e, i, o, u, y, with several diphthongs, and "thereby formed words that denote numbers, which may "be more easily remembered: and Mr. Lowe has im-"proved Dr. Grey's scheme in a small pamphlet called "MNEMONICS DELINEATED, whereby in a few leaves "he has comprised almost an infinity of things in science "and common life, and reduced them to a sort of mea-" sure like Latin verse."

Under sanction of the great authority above quoted. the publisher of the present edition has annexed Mr. Lowe's tract, which the author originally intended both as a supplement to and an improvement of Dr. Grey's method; accordingly asserting in his advertisement, that " most of the articles are what perhaps did not occur to "Dr. Grey; and the rest are reformed to good purpose, "particularly those of Weights, Coins, and Measures, of "which I have given a full account in less than eight "pages, whereas the Doctor's, though very defective, " amounts to twenty-eight."

The two schemes are now before the reader, to use whichever seems best; and though Mr. Lowe's is, in some instances, little more than a repetition of Dr. Grey's plan, yet it has been thought advisable to reprint the whole at full length, and even to follow his peculiar mode of spelling, as most consistent with brevity. It may also be necessary to premise, that Mr. Lowe's astronomical calculations are according to the old style, and his geographical divisions are as they existed in the year 1737, the time when his pamphlet was first published; which disagreement with the present period it is hoped the industry and sagacity of the learner can easily rectify, by composing new technical words, which may be more easily remembered than those formed by another; these works being originally designed more as specimens of what might be done by attention, than as complete sets of tables in the various branches of learning and science.

THE KEY.

DIRECTIONS FOR THE BETTER LEARNING TO REMEMBER FIGURES OR NUMBERS EXPRESSED BY LETTERS.

α	e	i	0	n	au	oi	ei	ou	y
					6				
b	d	t	f	l	S	n	Ic.	n	~

g 100, th 1,000, m 1.000,000.

r denotes fractions, as follows; ,ro \(\frac{1}{4}\), ,iro \(\frac{3}{4}\), d,eri 2\(\frac{2}{7}\), ray \(\frac{1}{4}\).

ARITHMETIC.

ARITHMETICAL CHARACTERS.

+ and; - less; × multiplied-into; ÷ divided-by, = is, gives.

THE DIVISION	OF THE	${\tt OLD}$	ROMAN	AS,	VIZ.	${\tt ANY}$	INTEGER					
or whole.2												

Uncia.	Sext.	Quă. T	rĭens.	Quinc.	Sem.	Sept.	Bes.
		Dödi	ră. De	xt. Deu		•	

As, parts		12	Semissis .	•		6	
Deunx .		11	Quincunx			5	
Dextans.		10	Triens .			4	
			Quadrans				
			Sextans .				
Septunx .		7	UNCIA .			1	

COINS.

COINS REDUCED TO FARTHINGS.

1	E.]3 Sh-ok.	Cr - $\check{e}fy$.	N- idz .	Ange-okz.	M-ăufy.
	G	ui <i>-bzyk</i> . Ca	ır-băzo.	Jac-beg.	

2 H. Ger-f.] Bě-lĩ. Sh-abz. *Man-sups. †Tal-ĭdeith feil.] Sh-aplĕ. Tal-um dusth.

3 G. Lep-, tăritau. Dichăl-a, pref. ŏb-u, rau.] *Dr-ib. ↓Stătĕr-ado.

4 R. Τ,οἰρὰτὰτh. §As-t,raz.] Ses-p,irf. V-al,rž.
Dĕn-ib. Sp-οϊl.] Aŭr-οipu.

* ↑ ∫ DRACHM.] Hĕb-ĭs. Att-tž. Alex-οid—MIN.]

Att-tig. Ităl-ekeiz.

TAL.] Att-boukth, Băb-ĕtath.] Att-ĭbauth
eig. Bab-ĭm-ăunsth. R-akyth.

STATER (gold) Att-poil. Cyz-Phil-Alex-dap.

Croes-Dări-buly.

As weighed Ounces-ad, U-C-bouz: e; fouz:

a; lip: -ăre; leis.

MONEY.

SUMS OF MONEY, OR MONEY OF ACCOUNT.

5 { (E) Penn-f. Gr-as. Pound-ousy. (G) TAL. MIN. Egĭ-g=ubss. ⁵Ant-sy=g.

6 { Bab-oi=tuns. Pt-az=azti. Syr-al=poil. Tyrianeiz=fatt.

7 (R) SESTERCE—tŏ-ath, duo, bini nummi-

tŏ-am, duo, bina, 8 {-stertia: or millia sestertiùm,—above, by the adverbs, as follows:

Bis sestertium, or bis; understanding millia centum (or centena).

Abbreviatures explained.6

Æginéa mina, talentum, (lin.) 5. Alexandrina drachma, *; stater, ↓. Angel, 1. Antiochica min. tal. 5. As, 4, §. Attica drachma, *; mina, *; statal. 5. As, 4, 5. Attica dractina, 7, initial, 7, stater, ‡; talentum, †. Aureus denarius, 4. Babylonica min. tal. †. Bekah, 2. Carolus, 1. Crœsius stater, ‡. Crown, 1. Cyzicénus stater, ‡. Daricus stater, ‡. Denarius, 4. Dichalcos, 3. Drachma, 3. Gerah, 2. Groat^c, 5. Guinea, 1. Hebraica drachma, *. Jacobus, 1. Italica mina, *. Lepton, 3. Manch, 2. Mark, 1. Mina^c, *, 5. Noble, 1. Obolus, 2. Phyllippings 5, Phyllippings 6, Phyllippings 7, 3. Pennyc, 5. Philippicus stater, 1. Pound, 5. Ptolemaica min. tal. 6. Románum talentum, †. Sestertium, 7. Sestertius, 4. Shekel, 2. Shilling, 1. Sportula, 4. Stater, 3. Syria min. tal. 6. Talentum^c, 2, 5. Teruncius, 4. Tyria min. tal. 6. Victoriátus, 4.

Synonyms and Equivalents.

Æs, as. Assarium, as. Attica minor mina=antiochica. Attica major mina=tyria. Bigátus, denarius. Centussis, 100 asses. Chalcos, 1 dichalchos. Decussisc, 10 asses. Didrachmon, 2 drachmæ. Diobolon, 2 oboli. Dupondiusc, 2 asses. Eubaa mina = antiochica. Hemiobolon, ½ obolus. Laureat, carolus Libella, as. Libra (or libra pondo) = mina attica. Mna, mina. Nonussis, 9 asses. Nummus, sestertius. Obolus, $\frac{1}{2}$ noble. Octussis, 8 asses. Pentadrachmon, 5 drachmæ. Pondo, v. libra. Quadrans, $\frac{1}{4}$ as, $\frac{1}{4}$ noble. Quadrigátus, denarius. Quadrussis°, 4 asses. Quinarius, victoriátus. Quinquessis°, 5 asses. Rhodia = æginea. Sembella, semilibella. Semilibella, $\frac{1}{2}$ libella. Semuncia, $\frac{1}{2}$ uncia. Sescuncia, $\frac{1}{2}$ uncia. Sescuncia, $\frac{1}{2}$ uncia. Sextans,° $\frac{1}{6}$ as. Sextula,° $\frac{1}{6}$ uncia. Solidus, aureus. Tetradrachmon, 4 drachmæ. Tetrobolon, 4 oboli. Tressis, 3 asses. Tricessis, 30 asses. Tridrachmon, 3 drachmæ. Treins°, $\frac{1}{6}$ as. Triobolon, 3 oboli. Vigessis, 20 asses. Uncia°, $\frac{1}{12}$ as.

1. N.B. The several coins, measures, and neights, being reduced to the lowest denominations, the memorial verses answer all the purposes of the largest tables: (1) The difference of any two terms being known by subtraction³: and (2) How many of any nake one of another, by division⁵.—e.g. (a) What is the difference between a *hilling and a Shekel? Answ. (Sh-ab:) 110—(Sh-ok) 48=62 q. i.e. S 2:3:2-Sl=Sl:3:2, the shekel more than the shilling. (b) How many Spans make a Fulhom? Answ. (Fath-oid) 72÷(Spa-n) 9=S. Accordingly, if it be asked, What is a Fathom? (and so of any other) the answer may be made the same way, in any of the prior denominations: e.g. 24 palms, or 6 feet, or 4 cubits, or 2 yards, or $l\frac{1}{2}$ pace, &c.

2. Any whole was called AS, and 1 twelfth of it Uncia [whence our terms of ounces for weight, and inches for length]. The several numbers of those unciæ (between 1 and 12) — were denominated, in order, as follows in text: viz. Sextans (i.e. $\frac{1}{6}$) 2 Quadrans ($\frac{1}{4}$) 3, &c. — and express their manner of reckoning Interest of money: thus usuræ asses [centesimæ] was 1 per month [12 per year] per cent. (suppose aurei, or pounds:) deunces, 11 twelfths per month, and so on to unciariæ, 1 twelfth per month [1] per

year] e. g. 20d. per month, 20s. per year.

3. Of the three apartments distinguished by brackets, in the 1st are Brass- or Copper-; 2d, Silver-; 3d, Gold-coins.—N.B. (1) Sh-ok (as appears by the Abbreviatures explained underneath, and by the key above) signifies Silting 4S: i.e. a shilling is 4S farthings; and so of the rest. (2) y (the memorial letter) may be pronounced nce or ni, to distinguish it from i; e.g. Cr-efy, as if it were Cr-efni.

4. i. e. in the year (Urbis C-ondita) from the building of the city of Rome, 190—C-fouz; i e. U. C. 490, when the Punic war had exhausted the treasury, it weighed but 2, and so of the rest.

5. i. e. the Æginean mina was (ubss) 5656 q: (g) 100 of which

made the Æginean talent. And so of the rest.

6. N. B. In these lists, those in Italic are moneys of account; the rest, coins. The Figures and Marks refer to the corresponding memorial verses.

(c) N. B. There are also Coined Half-guineas, Seven-shilling pieces, Half-crowns, Threepences, Twopences, Halfpence, and such

as are distinguished by a superior c.

MEASURES.

CUBIC MEASURES REDUCED TO PINTS.

J Quar-d. *Gal-k. R-afo. Bar-eld. Ti-(WINE) tts. 1 Quar-d. *Gal-k. R-afŏ. Bar-eld. Ti-(WINE) tts. H-uzf. P-aŭpĕ. B-athei. T-ethbau.
2 Firk-boid, ásf.¹ Kil-ābek, baff (BEER & ALE). Bar-bdeĭk, ădns. Hŏg-ălad, bnps.
3 Pe-bs. Bŭ-so. Str-aek. Coom-dus (DRY). Se-ŭbĕ. Ch-etzo. We-ithpĕ. Lă-lady.
4 (liq.) C-,urei. L-irŏ. Căb-i. H-az (H). Seăh-dý. Bath-sý. Hŏm-auzu (-nid).
5 Cab-,durau. Gŏm-,ăraz. Se-boi (DRY). Bă-lă. Le-dlaŭ. Hŏmer-lat.
6 Coch-,rădý. Ch-rauz. Myst,rok (G). Conch-,raf. Oxybă-,reĭ. Metr-eis.

Coch-, rădy. Choen-bre. Medim-pe (DRY). Cy-

7 Coch-, rădy. Choen-brē. Mědim-pě (DRY). Cy-Ox-Cŏty-Xest-as the Roman.
8 Quart-, rö. Sĕ-a, rl. Cŏ-p. Ur-ek-ră (R). Quă-dr-up. Cŭlë-bafp. Li. Cy. Ace. Hem.
9 Lig-, rok. Cy-, rad. Acet-, rei. Hěm-(DRY) in, rē. Sĕ-a, ri. † Mod-as, re.
10 {*Gallŏn cŏntains inches (dry) doid, rŏ: (beĕr) - kĕ: (wine) eta³.
11 {†Pettle Quărts (dr-) i (liquid)-e-†Modi-Pints (liquid)-an (dry)-bau, ro.

Abbreviatures explained.

Acetabulum (lin.) 9, 8. Barrel, 1. Bath 4. Bushel, 3. Butt, 1. Cab, 4. Caph, 4. Cheme, 6. H 2

Chandron, 3. Chœnix, 7. Cochlearion, 6. Concha, 6. Congius, 8. Coomb, 3. Culeus, 8. Cyathus, 9. Firkin, 2. Gallon, 1. Gomer, 5. Hemina, 9. Hin, 4. Homer, 4, 5. Hogshead, 1, 2. Kilderkin, 2. Last, 3. Letech, 5. Ligula, 9, 8. Log, 4. Medimnus, 7. Metrétes, 6. Modius, 9, 11. Mystron, 6. Oxybaphon, 7. Peck, 3. Pottle, 11. Puncheon, 1. Quadrantal, 8. Quart, 1. Rundlet, 1. Seah, 4, 5. Seam, 3. Sextarius, 8, 9. Strike, 3. Tierce, 1 Tun, 1. Urna, 8. Wey, 3.

Synonyms and Equivalents.

Amphora, quadrantal. Amphoreus, metrétes. Cadus, metrétes. Carnock, coomb. Chos, congius. Coron, homer. Cotyle, hemina. Ephah, bath. Lingula, ligula. Omer, homer. Oxybaphon, acetabulum. Pipe, butt. Quarter, seam. Quartarius, \(\frac{1}{4} \) sextarius. Semimodius, \(\frac{1}{9} \) modius. Xestes, sextarius.

LONG MEASURES REDUCED TO INCHES.

1	Nail-d,ro. Pal-t. Hăn-ŏ. Spa-n. Foot-ad. Cŭbĭ-bei. E (f l) ĕp (eng) ol.
2	Y-is. Pa-sy. Fath-pe, Ro-bouk. Furl-oindy. Mĭ-sitsy. Le-miles 3.
3	H. Pal-f. Sp-ad. C-ef. F-ous. Ez-böf. Ar-and Schoen-andy. Stă-navg. M-ousth.
4	G. Dör-f. Lich-az. Orth-ab. Sp-ud. Pygm-ak Py-dz. O-nau. St-naug. M-oiskyz.
5	R. Unc-ă,ri. Pal-f. Pe-bs. Pal n-dy. Cŭo-ef Gră-kỳ. Pass-kỳ. Stă-byth.

^{1.} i.e. A Firkin (1) of Beer=72 pints; (2) of Ale=64 pints; and so of the rest.

^{2.} By act of parliament, in 1697, the gallon contains only $268\frac{4}{5}$ inches.

^{3.} By experiment, made in 1688, it was found to contain only 224 inches.

PROPORTIONS.

6 { Line-be. Băr-i. DIGIT, INCH (Heb. Gk. Rom.) nad: ,pulŏ: peldu!. [M²-eizth.
7 { Foot--Eng-ath.-Grĕk-ăzyp.-3 Rom (coss) naup (st) oupĕ (vĕs) oukau.

Abbreviatures explained.

Arabian pole, 3. Barley-corn, 6. Cubit=pygme, pygon, pechus 1, 3, 5. Digit, 6. Doron=palm, 4. Ell (flemish, english), 1. Ezekiel's reed, 3. Fathom, 2, 3. Foot=pous=pes, 1, 5, 7. Furlong=stadium, 2, 3, 4, 5. Gradus, 5. Hand, 1. League, 2. Lichas, 4. Line, 6. Mile = milion = miliáre, 2, &c. Nail, 1. Orguia, 4. Orthodóron, 4. Pace=passus, 2, 5. Palm=doron, 1, 3, 5. Palmipes, 5. Passus= pace, 5. Pes=foot, 5. Pygme, 4. Pygon, 4. Rod, 2. Schænus, 3. Span=spithame, 1, 3, 4. Spithame =span, 4. Stadium=furlong, 4, 5. Uncia, 5. Yard, 2.

Synonyms and Equivalents.

Ammah, cul it. Aulos, furlong. Chebal, scheenus. Cubit (lesser) pygme, (greater) pechys. Dactylo-dochme, doron. Diaulos, 2 stadia. Dochme, doron. Gomed, span. Kaneh, Ezekiel's reed. Measuring-rod, scheenus. Mili-are,-on, mile. Palæste, doron. Pathil, schænus. Pechys, cubit. Perch, rod. Pole, rod. Pollex, uncia. Pous, pes. Tophach, palm. Ulna, cubitus. Zereth, span.

2. N.B. A Sabbath-day's journey is reckoned to be 730 paces.

6 of which made the Parasang, 48 a day's journey.

^{1.} N.B. The Digit is sometimes divided into 4 grains; the Line into 6 points.

^{3.} i.e. The proportion of the Roman foot to the English (divided into 1000 parts) is here expressed as found-on the monument of Cossulius-on that of Statilius - on a congius of Vespasian.

SQUARE MEASURES REDUCED TO SQUARE FEET

(E. Yar-n. Pace-du. Pole-epe,ro. Rood-azkouz. Acre-otusy.

G. Plethron — azasf. Aroma, the half: but Ægyptian — itdaun.

R. Juger-esouty. Cli-tisaŭ. Vĕ-nily. (mĭn) A-fökeĭ (qu) atfauz.

Abbreviatures explained.

Actus minimus, quadratus, 3. Clima, 3. Jugerum, 3. Versus, 3. Yard, 1.

MULTIPLICATION TABLE.

 $\begin{array}{l} from \ 7 \\ by \ 12 \\ \left\{ \begin{array}{l} \text{P-oi},on. \quad \text{P-ei},us. \quad \text{P-ou},si. \quad \text{K-ei},so,} \\ \text{K-ou},pe. \quad \text{N-ou},cia.} \\ \text{F-ad},fei. \quad \text{L-ad},sy. \quad \text{S-ad},oid. \quad \text{P-ad},ko.} \\ \text{K-ad},ouŭu. \quad \text{N-ad},azei.} \end{array} \right\} = 49$

NUMERICAL LETTERS.

1 R. In Numerals] A less number, afore, Abates'; after, Encreases.²
2 I-b. V-u. X-az. L-uz. C-azy. D-ŭyz. M (Cl3') ath: hence (CCl32) byth.
3 H. \{ 8 \cdot b \cdot '-az \cdot p-ag' - \cdot b \cdot b' - \cdot from -ug} \text{ by τρς ing to ouzy}^6 [CCCl32) \{ -ath \text{ by the Units:}^7 \text{ but oftener by } \(\beta \) \(\beta \), prefixing the numbers' \([azyth. \\ a-b. \cdot i-az. \cdot p-ag. \\ a \cdot \) \(\alpha \) \(

1. e. g. IV. 4, IX. 9, XL. 40, XC. 90. 2. e. g. — VI. 6, XIV. 14, XIX. 19, XXIX. 29. — 11, γ. 12: τ1, ρ. 101 σς 101, φ. 101, &c.

3. Formed, in current writing, from M; part whereof, united,

(viz. 13) became D. 500; hence 133 5000, 1333 50000.

4. i.e. Units, tens, hundreds, begin from the letters here specified; and are to be reckoned on, in order, from them: e.g. α 1, β 2, γ 3, &c. ι 10, κ 20, λ 30, &c. ϱ 100, σ 200, &c.

5. Instead of ..., being the ineffable name of Jehovah.

6. e.g. 7 500, 5 600, 1 700, &c.

7. Before the letters expressive of hundreds; as, ארלד 1534: very seldom otherwise; און 1070.

8. e.g. אלפיים 2000, נאלפים 3000, לאלפיים 30000, &c.

9. The various figures and names of these numeral characters, see in my Table of Greek characters.

10. e.g. Δ (10) inscribed in Π (5) is Δ (50).

PRACTICE

1. If one? the sought into Price, or its factors; and by Aliquot parts, and, by the Aliquots of Fractions of Sought (if any) divide Price.

2. What'll one?6 the Price by Commodity;7 but, if too

large, by its factors.8

1. i.e. In questions where the conditional term is 1: as, when we say, "If one cost so much, what will so much cost?"

2. i. e. Multiply the question-term, or thing sought, into the price, &c.—e.g. If one cost 10s. what will 20 cost? &c. Answ.

20 (the thing sought) \times 10 (the price)=200s. i.e. 10l.

3. viz. when more commodious.——e. g. If one cost 12s.6d. what will 14? Answ. The factors of 14 being 2×7 ; say $2 \times 12s.6d$. =25s.: then $7 \times 25s$.=175s. i. e. 8l.15s.—— N. B. If the multiplicator be not resolvable into factors, take those that come nearest it, and add the price for the odd one, or multiply it by what the factors want of the multiplicator.

4. Divide it by the Even parts of the denomination, in which you would have the answer.—e. g. If one cost 12s. 6d., what will

14? Answ. 10s. being the $\frac{1}{2}$ of 1l. and 2s. 6d. (which makes up the 12s. 6d.) the $\frac{1}{4}$ of 10s.; say 2 in 14=7l.; then 4 in 7 (the quotient of 14 by 2)=1: and there remains 3l., which, in the next inferior denomination (viz. shillings) is 60, then 4 in 60=15s.

5. As in the following example

84 cwt. 3 gr. 111b. at 11. 1s. 10d.

	84	1	gr. lb.	s. d.
22 1.	l. 1s. = 21		$\frac{1}{2}$ 0 $\frac{1}{2}$	10 11
nots 1s.			10 2	5 5
<u> </u>	84		0 7 1	1 4 4
Aliq of	168		$0 \ 4 \ \frac{1}{7}$	0 91
6d. $\frac{1}{2}$	42			
4d. $\frac{7}{3}$	28		3 11	18 6
3 gr. 11 lb.	18	6	~~	~~
			-12 C.C	and of fund

In all 1852s. 6d. the answer: which, being halved, gives 92l, 12s. 6d. the price of 84 cwt. 3 qr. 11 lb.

6. i. e. In sums, wherein the Question-term is 1; as when we say, "If so much cost so much, What'll one cost?"

7. e.g. If 12 cost 10s. 6d. what will 1? Answer, 12 in 10s. 6d. I cannot have; but 12 in 10×12 (to reduce it to pence)=120 + 6 = 126: then 12 in 126 = 10d. and 6 remains; which multiplied into 4 (to reduce it to farthings) is 24: then 12 in 24 = 2 q.

Thus in
$$\begin{bmatrix} s, & d, \\ 10 & 6 \\ 12 & 0 & 10\frac{1}{2} \end{bmatrix}$$

or, by the factors of 12, viz. 2×6 , or 3×4 ; as in the following:

8. The foregoing example will stand thus:

	s.	d.	1		s.	d
In	10	6		In	10	6
2	5	3		3	3	6
6	0	101		4	0	$10\frac{1}{2}$

So the answer is found more easily than by dividing by 12; much more so will it be, when that number is higher.

RULE OF THREE.

ALL QUESTIONS IN IT ANSWERED (1) BY ONE STATING (2) THE SAME WAY.

- (1) CONDITIONAL in one line: and, opposite, the terms CORRESPONDING.
- (2) -DENE is the -Ducing of one into -Duc'd of the other: the Rest-Sor.
- N. B. No Duc'd: the facit of one line divide by that of the other.²
- 1. i.e. The producing terms of one line multiplied into the produc'd of the other, give the divident; and the rest of the terms multiplied together, give the divident; the quotient falls to the blank.——(a) Preducing terms are such as jointly produce any effect; e.g. whatever is considered as a cause, with the adjuncts of time, distance, measure, δ(c.——(b) Producing terms are such as are connected with the others under the character of price, purchase, produce, gain, loss, interest, advantage, value or quantity of mork, δ(c.——(c) e.g. At the rate of 0 per cent, per ann, what is the interest of 200t. for 18 months? Answ. The terms being stated, as they offer (without any other regard than Which are conditional, and Which imply the question); Thus:

Interest,	Principal.	Time,
61.	100%	12m.
	200	18

or in any other order agreeable to the directions in the rule, say 6 (the produced term of one line \times 18 \times 200 (the producing terms of the other) = 21600 (for the dividend; and (the rest) 100 \times 12 = 1200 (for the divisor). Then 21600 \div 1200=18, the answer; viz. 186.

2. i.e. If there be no produc'd term (as generally happens in the single rule of three inverse) divide the facit, &c.—e.g. How much stuff, yard-broad, will line 10 yards of cloth, yard-and-quarter broad? The terms being stated thus:

broad	long	$ say 5 \times 10 = 57$
4 qrs.		and 50÷ 4=12 ²
5	10 yards.	i. e. 12 yards and $\frac{2}{3}$ or $\frac{1}{3}$.
		н 3

SUBTRACTION

May be more commodiously performed by Addition, as in the next article.

TABULATING.

TO MULTIPLY AND DIVIDE BY ADDITION ONLY.

- Twice-double-Multiplicand facits† every multiplicator. † gives the f. of.
- 2. Tabulate Divisor: Quote next digit-under: Subtract by Addition.

1. In the Multiplication-sum (I.) the Multipli-cand cator	
facits of the multiplicand twice doubled, 2 1 98765 x 768	
are, as they stand against the digits 2 and \(\mathbb{z}\) 2 197530 (I.)	
4. Then, To multiply the multiplicand— 3 4 395060	
into 8 (the last figure of the multiplicator) by .	
double the facit of the digit 4 —into 6 3 790120 9 6 1 1 1 1 1 1 1 1 1 1	
(the 2d figure, &c.) add the facit of 4 to 3 5.2590 7 2	
that of $2 (= 6)$ —into 7 (the next figure, ≤ 691355) $= 6$,
&c.) add together the facits of $1.2.4 (=7)$. ————(II.)	
placing each of them as in the common \$\frac{2}{5} 75851520 \div 7681	ı
placing each of them as in the common $75851520 \div 768$ method of multiplication. 2 In the Division sum (II.) (1) Tabu- $75851520 \div 768$ 5898 2304 5898 2304	2
2 In the Division sum (IL) (1) Tabu- 5898 2304 3	3
late the divisor, as in the example, viz. 3012!	b
against the digit 2, by adding the divisor Quotient (III.) 3840	,
to itself: against 3, by adding together 98/00 ÷ 908 4008 to	,
the totals of 2 and 1: against 4, by adding 1929 1930 5376 7	7
the total of 2 to itself, or that of 3 to that Quotient 102 6144 8	3
of 1; and, in like manner, in the rest, by 6912	,
adding together the totals of any two or more digits, equal to the	•
digit whose total is sought. Then, (2) Quote (or, for the quotient	
take) the digit against the total next less, or under the first corre	
sponding figures of the dividend, viz. 7585. Then, instead o	
subtracting, according to the common method, the facit of the	
divisor by 9 (viz. 6912) from (7585) the corresponding figures o	
the dividend (3) Subtract by addition, and say [not, 2 from 5, and	
there remains 3; but] 2, and (so much as will make 5, viz.) 3 is	

5: then 1, and (as much as will make 8, viz.) 7 is 8: then 9, and [what will make 15 (since 9 cannot be taken from 5) viz.] 6 is 15*; then, 1, that I borrow, and 6 is 7; and so on.———In the Division-sum (III.) it appears that——All the tabulating necessary to find the quotient, is only to double the divisor: for, the total next less than (the 1st dividend) 987, is 968: therefore quote 1: then (the 2d dividend) 196 has no total less; therefore quote 0: then the next total less than (the 3d dividend) 1965, is (the 2d total, viz.) 1936; therefore quote 2.———And, in like manner, may be tabulated any sum by steps, as there shall be occasion.

(a) N.B. 15, being the last sound in the mouth of the operator, does more readily and certainly remind him of what he borrowed, than in the common way of subtraction; which is no small advantage to this method.

WEIGHTS.

TROY WEIGHT, FOR GOLD, SILVER, JEWELS, GRAINS, AND LIQUORS.

MONYERS REDUCED TO BLANKS.

1 Mon. Pěrĭt-ef. Droit-oky. Mite-abth-udy. Grain-dizozy.

GOLDSMITHS AND APOTHECARIES WEIGHT REDUCED TO GRAINS.

2 (Gold.) Căr-ô. Pen-dö. (Pŏ.) Scrup-dy. Drăm-auz. Ounce-oky. Pŏ-loisy.

AVOIRDUPOIS WEIGHT, FOR BASER-METALS, BREAD, MERCERY, GROCERY, &c.

WOOL REDUCED TO POUNDS.

3 Clove-oi, Stone-bö, Töd-ek, Weigh-beid, Sacktauf, Last-fisei.

OTHER THINGS.

4 Pound-ounce-as. Hun-pounds-abe. Hun-Fother-anare: Tun-ez.

HEBREW WEIGHTS, REDUCED TO GRAINS.

5 Zuza-lf. Bek-azei. Shěk-ĕbei.² Măn-ĕbeizÿ. Tăl-amnyth.

GREEK AND ROMAN WEIGHTS.

6	Lens-, kŭrăbe. Lept-aurek. Chalch-ă, re. Sil- t, rek. Ob-ou-trek.	6
7	Script-ak,traf. Dra-lf,ouraf. — Sext-oid,aurp. Sicil-azn,erp.	7
8	Duell-bol,uroi. — Unc-fip,voi. — Libra-	8

PROPORTIONS.

- 9 Grains English-bif,re make French-alei, Dutch-apou.
- 10 Ounce has grains Avoir-ofei, Troy-fouz: as eig to oii.
- 11 POUND Avoir-heavier than Troy by 2 ounces 4 drams, and 2 scruples.

Abbreviatures explained.

Bekah, 5. Carat, 2. Chalcos, 6. Drachma, 7. Duella, 8. Hundred-weight, 4. Lepton, 6. Maneh, 5. Obolus, 6. Penny-weight, 2. Pound, 2. Scriptulum, 7. Scruple, 2. Sextula, 7. Shekel, 5. Sicilicus, 7. Siliqua, 6. Talent, 5. Uncia, 8. Zuzah, 5.

Synonyms.

Gramma, scruple. Keration, siliqua. Lens, grain. Litra, libra. Quintal, hundred-weight. Sitarion, grain.

^{1.} N.B. The Grains used in weighing Diamonds, are somewhat lighter than those used in gold, &c.

^{2.} i.e. 218, according to Bishop Cumberland: 268, according to father Mersenne.

3. So that the avoirdupois-ounce is less by 42 grains than the troy-ounce; which amounts to near a 12th part of the whole.

4. i. e. 73 ounces-troy make 80 ounces avoirdupois

ASTRONOMY.

MARCH,

THE FIRST DAY, TO FIND ON WHAT DAY OF THE WEEK IT HAPPENS.

- 1. The year, more 2 and even-4th, divide by 7:
- 2. By what remains (for 0 sat. 1 sund. and-so-on) it is given.

E. G. An. Dom. 26+2+6 (its even 4th)= $34\div7$, remains 6; i.e. Friday; accounting Saturday 0, Sunday 1, Monday 2, &c. — Before Christ, reckon backward; viz. Sunday 1, Saturday 2, and so on to Monday 0. e.g. Bef. Ch. 7+2+1 (its even 4th)= $10\div7$, remains 3, i.e. Friday.—Of the other months to find the 1st day, and consequently what day of the week any day is; V. Signs.

MONTHS.

THE NUMBER OF DAYS IN EACH, WITH THE DAYS OF THE NONES AND IDES.

Ap Sě Nő June-iz; Mar-Mă Jül Oc, No-p, ID-al; in the rest, l..at.

1. February, it is well known, has 28 (in the leap years 29), the rest 31.

2. i.e. The Nones are on the 7th day, the Ides on the 15th, in these 4 months.

3. i.e. The Nones are on the 5th, the Ides on the 13th, in the rest.

MOON.

CYCLE AND EPACT.

Golden's remainder of year-more-1, divided by 19.1 Epact's the cycle into ab: above iz by iz, the remainder.2

CHANGE AND AGE.

New's the remainder of month-from-march and epact, less iz, auz.3

Ap. Se. No. Jun. less en-For Jan. Mar. o. Feb. Apri. 1 add.

Full's 15 days from the change—Waning, east; Growing, west is enlightened.4

RISING AND SETTING.

At Sun-set, sets New, rises Full; and, each day, minutes ub more.

Shining (in Waning) Subtract (in Encreasing) Add to Sun-rise,-set.

SOUTHING AND TIDES.

Southing's the age into ok by 60: from al, the excess

High-water at London-bridge: Two hours and a half after Southing.6

^{1.} e.g. 1737 + 1 = 1738 + 19 = 19: remainder 9, for the cycle, or Golden Number.

^{2.} e.g. 9 (the cycle) $\times 11 = 99 + 30$ (as being above 30)=9:

remainder 9 for the epact. 3. e. g. May 20 (1737) What is the moon's age? Answ. 3 (the

number of the month from March, inclusively) + 9 (the epact) =12-10=18: the day of the new moon, when it is said to change. So the moon, on the 20th of May, is 2 days old.

^{4.} i. e. The Horns are turned, in Decreasing (from the Full)

Westward; in *Encreasing* (from the New) Eastward.
5. e.g. April 15 (1737) When comes the moon to the meridian? Answ. The moon's age is 26: the excess above (al) 15, is 11.

Then $11 \times 48 = 528 + 60 = 8$ h. 48 m. for the Southing.—For the readier working, the rule may be thus expressed: "Age into 4, by 5: into 12 the remainder gives minutes." e.g. $11 \times 4 = 44 \div 5 = 8$ h. remainder $4 \times 12 = 48$.

6. e.g. Apr. 15 (1737) the moon Souths at 8 h. 48'. Then 8 h. 48' + 2 h. 30' = 11 h. 18'. (N. B.) If the total amounts to more than

12, the excess shows the hour.

THE TWELVE SIGNS

Or portions of the Zodiac, named from Constellations once in them; their names, characters, and corresponding months; with a Key to find the Sun's place on any day; and on what day of the week the first day of any month happens.

- 1	Ar	ma	n^1	a^2	Υ	Aries
2	Taur	apr	ou	f	8	Taurus
3	Gĕmĭ	may	\boldsymbol{k}	s	п	Gemini
4	Cance	jún	\boldsymbol{p}	e	9	Cancer
5	Lĕ	jŭl	\bar{p}	f	N	Leo
6	\mathbf{V}	au	p	p	m	Virgo
7	Líb	se	p	$p \brack i$	_	Libra
8	Sc	oc	s	ŭ	m	Scorpio
9	Să	no	p	ă	1	Sagittarius
10	Că	de	k	t		Capricornus
11	Aquă	ja	n	S	<i>~</i>	Aquarius
12	Pĭscĕ	feb	ba	d	\aleph	Pisces

1. The method is this: To the day of the month (+11) for the old style) add the number signified by the numerals n, ou, &c. the Sun (-30), if above 30) is in the degree of the sign corresponding to the day of the month. e. g. Feb. 10+11 (for the old style) +11 (for the numeral ba)=32-30=2° of \times .

2. Thus: From the day on which March 1st happens (V. March) for any other month, count forward so many days as are signified by the numerals a, f, &c. e. g. Mar. 1st. 1737, was Tuesday: therefore Apr. 1st [counting (f) 4 onwards, Tuesday being one] is

Friday: and, consequently, the Stn, 15th, 22d, 29th, are Fridays; whence may be known the rest. [N.B. Jan, and Feb, are reckoned from Mar, of the preceding year.]

SUN.

THE TIME OF ITS RISING EACH DAY.

8 Jăn-o.¹ 7 Febr-ei. 6 Mar-bỹ. 5 Apr-ou. 4 M-as.† 4 Júl-p. 5 Aug-at. 6 Sept-ad. 7 O.. be. 8 Na-l.† †Jun-da, the Longest, i fi.²—— the Shortest, ei boi, Decem-da.‡

FOR THE INTERMEDIATE DAYS.

Sought, into 60, by All, gives Min. fewer 1st line, more 2d.

THE TIME OF ITS SETTING EACH MONTH, &c.

Setting's the complement of rising to 12; and, doubled, the day gives.

CYCLE AND DOMINICAL LETTER.

Cycle's the remainder of year-more-9 by ch: if 0, ch. ek cycle's A; cp, B; and so on; e'ery 4th has 2 (next after these 3ds; d E, au G, a-y B, bo D, aci F, de A, dau C) and

FORMER is used till Feb-do, in Leap-years; and, after, the LATTER.

TO FIND THE SUN'S PLACE IN THE ZODIAC, V. SIGNS.

1. i e. On Jan. 4, the Sun rises at S.

2. i.e. On Jun. 21, New style (which is the Longest day) the Sun rises at 3 h. 43'.

3. i.e. The day sought (reckoned from the day of the Sun's rising) multiplied into 60, and divided by the number of All the days between the day of the Sun's rising (specified) in any month, and the day of its rising in the next, gives the Minutes fewer (or,

to be subtracted from the hour specified) in the 1st line; more (or, to be added) in the 2st line.—e.g. Apr. 13, I would know when the Sun rises. By 5 Apr-ou I find that the day sought (reckoned from the day of the Sun's rising, viz. the 9th) is 4 [for 9+4=13.] Then $4\times60=240$: and 240+36 (the number of All the days from 5 Apr-ou to 4 M-as: i.e. from 9, the day the Sun rises at 5 in April; to 16, the day the sun rises at 4 in May)=6' [and $\frac{2}{3}\frac{3}{6}$ i.e. by reduction] 40''-5 h. (the day it rises on the 9th of April 2^{2} h. 53', 20'', then, therefore, the Sun rises on that day, viz. Apr. 13.

4. Thus, Dec. 21, New style, the Sun rises at 8 h. 17': the complement of its rising to 13 is 3 h. 43' [for 8 h. 17'-12 h.=3 h. 43'.] The Sun, therefore, sets at 3 h. 43': and this, doubled, gives the length of the day, viz. 7 h. 26': shorter by 9 h. 8' than the longest; which (by the same calculation) will be found to be 16 h. 34'.

5. e.g. $1737 \times 9 = 1746 \div 28 = 62$ (the number of revolutions since

Christ) remainder 10, for the number of the cycle.

6. i.e. If there be no remainder, it will be (ek) the 28th, or last

year of the cycle.

7. i.e. The dominical letter answering to the year of the cycle 28 is A; to 27, B; and so on (backwards) to G, the 7th and last:

after which returns A, B, &c.

S. e. g. Every 4th (or Leap years) has 2 dominical letters: the latter of which is used after Feb. 24, the intercalary day; which is therefore denoted by the same letter as the 23d.—N.B. For the readier finding the dominical letter answering to any number of the cycle, I have given (in parenthesis) those of every third: thus $(aei\ F)$ F answering to 18 (one of the 3ds there specified), 17 (the next 4th, reckoning backwards) will be GA; 16, B; 15, C; &c.

For the readier finding Leap-year, the rule is this: "Year-sought divide by 4; what's left will be, for leap-year, 0; for past, 1, 2, or 3." e.g. 1737-4=434: remainder 1, for 1st after leap-year

CHRONOLOGY.

ROMAN MANNER OF DATING.

(1) Kal. Non. Id. (2) Pridie. (3) Tert. quart: (nb)
The day sought subtract from

One more than Ide-None-days; Two more than the months, for the Kalends.

I. (i. e.) For the days on which the Kalends, Nones, Ides of any month happen (V. Months) write (e. g.) Kal. Dec. on the kalends of December, viz. the 1st day of December. (2) On the day preceding each of them, write (e. g.) Pridie Kal. Dec. i. e. pridie kalendas decembris, on the day before the kalends of December, viz. the 30th of November. (3) For the days backward, write Tertio, Quarto, &c. i. e. on the 3d, 4th, &c.

11. To find any of the days, e. g.—(1) 10th of December. What, in the Roman style? Answ. 10—14 (One more than the days the ides happen on=4. i. e. 4to id. Dec. Again (2) 4to id. Dec. What, in the English style? Answ. 4—14=10 i. e. the 10th of December.—(1) 20th of November: Say 20—32 (Two more than the number of the days in the month)=12 i. e. 12mo. kal. Dec. (2) 12mo. kal. Dec. say 12—32=20.

EPOCHAS.

THEIR COMMENCEMENT IN THE JULIAN PERIOD.

Spanish Tróy Yezdegir	ábon lympic hilip om	ioclesi d ct	World pauf Christ* opaf Act oski Agon.capit.opnon Báb doke Cyr obki
ofyt ospan tute utof	ospa inaup inih otni insa	cyan onnoi idáp ntil nzel	panf opaf óski oski obke obkí
4403 4676 3532 5344	4671 3967 3938 4393 3971	2419 4997 3217 5335 5025	764 4714 4683 4799 2482 4183
4403 Contracts 4676 Spanish 3532 Troy taken 5344 Yezdegirdic	of Nabonassar of Nabonassar Olympic Philippic Rome built	2419 Deinge 4997 Dioclesian 3217 Exodus 5335 Hegira 5025 Indictions	764 of the World 1714 of Christ 1683 Actian 1799 Capitoline 1482 Babylonian 1183 of Cyrus
reign of Neleucus king of Syria, &c. defeat of the Spaniards by Calvinus. taking of the city of Troy. death of Yezdegird king of Persia.	reformation of the calendar under J. Casar, reign of Nabonassar king of Babylon, institution of the Olympic games. succession of Philip to Alex, the Great. building of the city of Rome (U.C.)	Noah's universal Deluge. persecution under Dioclesian. Going of the Israelites out of Egypt. Flight of Mahomet to Mecca. institution of the Indictions.	from the creation (A.M. or O.C.) birth of Jesus Christ (A.D.) defeat of Anthony at Actium. institution of the Cupitoliue games. beginning of the Assyrian monarchy. end of the captivity under Cyrus.

^{*} Christ born A. M. fyzo. Jew-tpaud. Greek, ecc-lonf: civil-ulzon.

TO FIND

- 1 { The year of the Julian period corresponding to any year in any Era.
- 2 { Any year of any Era by the corresponding year of the Julian period.
- 1) { Jul for After add Comm-less-1 for Afore take from Comm.
- 2) { ER—After, Comm-less-1 take for Corr—but Afore, Corr. from Comm.

1. What year of the Julian Period is the year 1737 (1) before Christ? (2) after Christ?——Answ. (1) 1737 (before Christ)—4714 (the year of the commencement of the Christian era in the Julian period) = 2977. (2) 1737 (after Christ)+4713 (the commencement-less-1)=6450, the year of the Julian period.

2. What year of the Christian Era is the year of the Julian period (1) 2977? (2) 6450?——Answ. (1) 2977 (the year of the Julian period corresponding to the year of the era sought)—4714 (the commencement of the Christian era)=1787. (2) 6450 (the corresponding year)—4713 (the commencement-less-1)=1787.

— The Christian vulgar era commences in the year of the world 4004, Jan. 1. [according to Helvicus, Isaacson, &c. 3948.]—The Jews place the creation of the world, Later by 242 years, viz. in 3762, Oct. 7.—The Greek historians, on the authority of the septuagint, Sooner by about 1490, or 1500 years, viz. the ecclesiastical, in 5494; the civil, in 5509.

^{*}FOR THE NUMBER OF YEARS FROM THE CREATION TO THE BIRTH OF CHRIST.

FESTIVALS, HOLY-DAYS, FEASTS, &c.

IMMOVABLE.

CHRIST.

Nát-de, du.¹ Círc-ja, b. Epiph-ja, s. Lámm-au, b. Ho Rood-se, bo. Transf-au, s.

MARY.

Ann-măr, el. Púr-feb, e. Nat-se, k. Vís-jul, e. Cónc-de, k. Ass-au, al.

SAINTS.

All-nŏv,ŭ. And-nov,iz. Bap-jun,ef. Bárnaby-jun,ab. Barth-aug,éf. George-apr,et. James-jul,du. Innŏcĕnt-dec,dei.

John-dec, doi. Luke-o, ak. Mark-ápri, du. Mártinovemb. ad.

novemo,aa

Mátt-se,da. Paul-jan,du. Pet-jun,dou. Phíl Jaco-may,a.

Sim Jud-o,ék. Ste-de,dau. Tho-dec,du. Válentine-feb,af.

ROYAL FAMILY, 1737.

Cór-o,ba. Prócla-jun,ab. Born, King-o,ty: seit. Queen-mar,a: seid.

Wáles-ja,ty: pyp. -cess-n,ak. AnOr-o,de: pўn. Ame-ma,iz: pab.

Car-ma, iz. pát. Will-apr, al: peb. Már-fe, de: pet. Loui-d, p: pef.

TERMS, AS IN 1737.

Terms hold weeks al: dáys Hilar-eb. East-ép. Trindy, Mich-tau.

Hil from ján-di to feb-bc. —— Mich from óc-do to nov-ek.

East, wěd-e áfter, begins: ends, áfter ascénsion, mond-a. Trin, friday áfter, begins; and ends 3d wédnesday after. Vac. holds weeks toi: dáys Hilar-oit. East-ap. Tr-abs. Mich-us.

QUARTERLY.

Lády-mar, el. Midsum-jun, ef. Mich-sep, dou. Chridec, al.

STATE HOLIDAYS.

Fíre-sep, e. Powd-no, l. Márt-ja, ty. Réstor-may, dóu. Revo-feb, at.

MOVABLE.

BEFORE AND AFTER EASTER.2

1 { Sept-st.² Sex-us. Shrove-ón. Qua-fe. Lent-os. Pál-p. Maund-i. Good Fri-d.

EASTER's the first Sunday after first Full-moon after March-da.

2 { Low-oi.2 Róga-tu. Asc-in. Whits-on. Trín-lau. Ad-eta.

EMBER-days. We Fri Sát, after Quá Whit Ho Róod Luci-dec, at.

EASTER TABLE.

PASCHAL-FULL-MOONS FOR THE GOLDEN NUMBERS, WITH THE HEBDOMADAL LETTERS.

1 A 2 M 3 A 4 A 5 M 6 A	l el bi e ed by	g e a I d I	7 M 8 A 9 A 10 M 11 A 12 A 13 M	iz bei oi eoi bu f eo	e 14 c 15 f 16 b 17 g 18 c 19	A M A M	be a ea u -eou -boi	d g c a d b
			13 M	eo	1			

USE OF THE TABLE.

Súm from Hebdóm to Domín (of the year sought) ádd to the Month's day.

Synonyms, &c.

Ash-wednesday, 1st day of lent. Candlemas, purification of the virgin M. Crucifixion, good-friday. Holy-week, last of lent. John the

Baptist, midsummer. Parasceue, good-friday. Passion-week, last of lent. Pentecost, whitsuntide, whitsontide. Processioning - day, ascension - day. Quinquagesima, shrove-sunday. Shor-(Shur-)thursday, maundy-thursday. Twelfth-day, epiphany.

1. i. e. The nativity of Christ is on Dec. 25, and so of the rest.

2. i.e.—Septuagesima-sunday is (st) 63 days before Easter [70 before the octave of Easter]—Low-sunday is (oi) 7 days

after Easter, and so of the rest.

3. The Easter-table consists of 5 verses, each ending at a period-mark; and may be read thus: "One-ald, two-melg, three-ăbi e. four-Ačă, five-medd," &c.—Its Use is to find Easter-sunday for

ever. V. n. 4.

4. e.g. A.D. 1737, the golden number is 9, the dominical lette. B., then, against 9 (in the table) the hebdomadal letter is F., from thence to the dominical B. are (g a b) 3; which added to apr. 7 (the day of the month, in the table) gives apr. 10, for Easter-sunday.—So A.D. 1736, golden-number 8, 1st dominical letter C; then from C (in the table) to C (dominic.) 7+apr. 18=apr. 25.

GEOGRAPHY.

In the following verses (which contain as much, I think, as is necessary to charge the memory with by way of foundation) I have given the most general divisions of the several parts of the terraqueous globe; beginning, in each, with the most northerly parts, and, in descending southwards, proceed (to the right) from west to east: so that children, with a few hints and occasional helps, may be able to find them, by themselves, and thereby fix them better in their memory; after which they will easily get the verses by heart, and be well prepared to consult the gazetteer, or to go through any system, with pleasure, to good advantage.

LAND.

Continents, Isles, Peninsulas, Isthmus, Canes, Mountains.

CONTINENTS.

EUROPE, AFRICA, ASIA, AND AMERICA.

AF (8) Bar (féz mor a tún tripo bárc) Bi (dar) Egy (ălex cair)

Zaár (zu) Ne (tómb) Nubi (dáng) Gui (ma whý be

lo c áng) Ethi (mon caf)

AM (23) Green Brit Wa La Can Acad Eng Jers Pén Mary Virg Car Geor Kent. Flor (aug pens) Mex (guád me ta jú

chi guat hon ver) Firm (pa ca már venez ánd gra po cóm dari) Pér (quito lím charc)

Am: Brăsı (sál seba vin) Chil (já) Para (guai tuch

plat) Mag

AS (5) Tar (a sib che thi) Turk (tu na curd sy diár) Pe (der isp gomb)

Ind (mog ag beng: vis go bi mál: pe to sí co) Chi

pek nank

EUR (18) Nor-berg. Swede-stock. (Scot-ed'n. Iredúblin. E-london.

Dén-cop. Hol-amst. Fland-bruss. Ge-vién. Po-wa.

Russ-peter: France-par.

Switz-basil. Hung-presb. Port-lisb. Spáin-mad. Itálro. Tu-constant.

AFRICA.

Barbary comprehends the kingdoms of Fez, Morocco, Algiers, Tunis, Tripoli, Barca. Bildulgerid: Daara. Egypt: (ch. cit.) Alexandria, Cairo. Zaara: (ch. prov.) Zuenziga. Negroland: Tombute. Nubia: Dangola. Guinea: Malaguette, Whydaw, Benin, Loango, Congo, Angola. Ethiopia: Monemugi, Monomotapa, Caffraria.

AMERICA.

Greenland, New - Britain, New - Wales, Labrador, Canada, Acadia or Nova Scotia, New-England, New Jersey, Pennsylvania, Maryland, Virginia, Carolina, Georgia, Kentucky. Florida: (ch. towns) St. Augustine, Pensacola. Mexico: (ch. prov.) Guadalajarra, Mechuacan, Tabasco, Jucatan, Chiapa, Guatimála, Honduras, Verágua. Terra - Firma: Panama, Carthagéna, St. Martha, Venezuela. Andalusia, Granada, Popayan, Comana, Darien. Perv: Quito, Lima, Los-Charcos. Amazonia. Brazil: (ch. cit.) St. Salvador, St. Sebastian, St. Vincent. Chili: St. Jago. Paraguay: (ch. prov.) Guaira, Tucuman, Rio-de-la-Plata. Terra-Magellanica.

ASIA.

Tartary: (ch. prov.) Astrachan, Siberia, Chenyang, Thibet. Turkey: Turcomania, Natolia, Curdistan, Syria including Palestine, Diarbec, Eyraco - Arabic. Persia: (ch. cit.) Derbent, Ispahan, Gombroon. India: (ch. prov.) empire of the Great Mogul (Agra, Bengal) Visiapour, Golconda, Bisnagur, Malabar, Pegu, Tonquin, Siam, Cochinchina. China: (ch. cit.) Pekin, Nankiu.

EUROPE.

Norway: (ch. cit.) Bergen. Sweden: Stockholm. Scotland: Edinburgh. Ireland: Dublin. England: Loudon. Denmark: Copenhagen. Holland: Amsterdam. Flanders: Brussels. Germany: Vienna. Poland: Warsaw. Russia: Petersburgh. France: Paris. Switzerland: Basil. Hungary: Presburg. Portugal: Lisbon. Spain: Madrid. Italy: Rome. Turkey: Constantinople.

CAPES, ISLANDS, PENINSULAS, AND MOUNTAINS.

CAPES: La Li St-éng. Fi Vi-spáin. Bla Ve Goodafri. Cóm-malab. Horn-fueg. ISLES: Zé-deu. Az-pŏ. Să Sic Ca Cy-méd. Ma Cabárb. He-gni. Mad-eth.

Mald Ceyl Súm Bo Su Jáv Phi Mo Ladr-ind. Newf-la.

Bér-flo. Ba Cú Jam Hi Ríc, Carib (áut ne mo barb) mex. Fueg-maq.

PEN: Ju-de. Mô-gre. Pre-tárt. Afri. Cámb. Malacind. Mex-amer-north.

MOUNT: Chevi-scot. Pyr-spain. Alps-it. Caucatárt. Apalach-n-am.

CAPES.

Land's-end, Lizard, Start-point (of) England, Finisterre, St. Vincent's, Spain. Blanco, Verd, Good-Hope, Africa. Comorin, Malabar. Horn, Fuego.

ISLES.

Zealand (in) Denmark. Azores (west of) Portugal. Sardinia, Sicily, Candia, Cyprus (in the) Mediterranean. Madeiras, Canaries (against) Barbary. St. Heléna, Guinea. Madagascar, Ethiopia. Maldives, Ceylon. Sumatra, Borneo, Sunda, Java, Philippines, Moluccas, Ladrones, East-Indies. Newfoundland, Labrador. Society-Isles (in the) South-Seas. Bermudas (against) Florida. Bahamas, Cuba, Jamaica, Hispanióla, Porto-Rico: Caribbees (Antigua, Nevis, Montserrat, Barbadoes) Mexico. Fuego, Terra-Magellanica.

PENINSULAS.

Jutland (in) Denmark. Morea, Greece. Precop, Tartary. Africa, Cambaya, Malacca, East-Indies. Mexico, North-America.

MOUNTAINS.

Cheviot (between) Scotland and England. Pyrenees, Spain and France. Alps, Italy and France. Cancasus (in) Tartary. Apalachian, North-America.

WATER.

Oceans, Seas, Gulfs, Straits, Lakes, and Rivers.

OCEANS: Hyp. Ethi. East. Alt-West. Paci-Southdel Zur. Ice.

SEAS: Ba de-Swede. Chan-éng. Med-eu,áfr. Black-eu,as. Casp-tartar.

GULFS: Bo Fi-swede, Ven-itál, Red-arab, Pers, Béng, Baff Hu-north-am.

STRAITS: Sound-bált. Gi-med. Hél-bla. Ba-réd. Sun-in. Húd-bu. Da-baff. Mag.

LAKES: Lad O-russ. Ne Lo-scot. Ge Lu-switz. Baba-pérs. Bo-ne. Par-firm.

RIV. Vő-că. Dan-bla. Khi-ger. Rh Eb Níl-me. T En-pers, Ga-be. Mis-mex.

OCEANS.

Hyperborean or northern. Ethiopian. Eastern Atlantic or western. Pacific or south, or mare del Zar. Icy near the south pole.

SEAS.

Baltic, east of *Denmark* and *Sweden*. Channel, south east of *England*. Mediterranean, between *Europe* and *Africa* and part of *Asia*. Black sea, between part of *Europe* and *Asia*. Caspian, in *Great Tartary*.

GULFS.

Of Bothnia and of Finland, in Sweden. Of Venice, east of Italy. Red-sea, between Arabia and Africa. Persian Gulf. Bay of Bengal, in Asia. Baffin's and Hudson's Bays, in North America.

STRAITS.

Sound (of the) Baltic. Gibraltar, Mediterranean. Hellespont, Black-sea. Babelmandel, Red-sea. Sunda, Indian-ocean. Hudson's, Button's-bay. Davis's, Baffin's-bay. Magellan, South America.

LAK! S.

Ladoga and Onega, western part of *itussia*. Loch-Ness and Lomond (in) Scotland. Lakes of Geneva and Lucern, Switzerland, Babacombar, Persia. Bornou, Negroland. Parime, Terra Firma.

RIVERS.

Volga (falls into the) Caspian-sea. Danube, Black-sea. Rhine, German-ocean. Rhone, Ebro, Nile, Mediterranean. Tigris, Euphrates, Persian-gulf. Ganges, bay of Bengal. Mississippi, bay of Mexico.

A MORE PARTICULAR ACCOUNT

of the several countries of Europe may be exhibited, so as to give a precise idea of the situation of each subdivision, after the manner of the following specimen; in which (beside what was proposed in general, note 1) such as are contiguous Southward, are joined, as in weLa: such as are contiguous Westward, are hyphened; as in Che-De-&c.

ENGLAND.

ITS FORTY COUNTIES.

Nor cum-dúr: weLa-yórk: che-de-not-linc: shróp-stale-rut norf:

Hér-wo-wa-nórtha: Bed-hunt-cámb-suff: mon-gl·óxfobuck-hert-ess.

Som--wilt--bérk--middlesex: corn--dev--dors--hámpsurrey-kentSuss.

FIRST MERIDIANS

ON EITHER SIDE OF TENERIFFE.

(Eást) London-as. (West) Fer-d. Jag-s. Nícol-oz. Corvó-bei. Bras-bon.

Abbreviatures.

Ferro. St. Jago. St. Nicholas, coast of Brasil.

The Dutch placed the first Meridian at Teneriffe; the French, since 1364, at Ferro, two degrees west of Teneriffe; others, variously, as in the memorial verse. In most of the French maps, and those copied from them, two degrees must be allowed on such as are calculated on the Dutch plan, to make them correspond; as, for example, Hamburgh is there said to be long. 29° 20′ E. consequently in the French maps it will be found in 31° 20′, and in similar manner are all the rest. Many modern geographers usually now calculate the first Meridian from the capital city of the state in which each resides: the English reckon from the Royal Observatory at Greenwich, near London; the North Americans from Philadelphia, situated 75° 8′ W. from London; and several of the French from Paris, 2° 20′ E. of London.

HISTORY.

BIBLE.

The several Books of it, with the time of their writing.

OLD TESTAMENT.

ITS THIRTY-NINE BOOKS

Elīh-jöb: ápty. Mo-pent: bog. Jósh: boly. Sámju-ki: bazy.

Dáy: byly. Sol-pro-can-ecc: ath. Mórd-e: toz. E'z-chr: ety. Neh: eg.

PROPHETS.

Jón: kse. Jo: cig. Am: pcíp. Hose: oicil. Is: păuy. Nah: puk.

Mic: put. Jér: sta. Zeph: autz. Haba: syu. Eze: loul. Obadi: lkoi.

Dániel: ull. Hag: léz. Zechari: udz. Málachi: touoi.

NEW TESTAMENT.

ITS TWENTY-SEVEN BOOKS.

- Matt-fa.² Mar-ot. Thess-lét. Pe-lo. Gal Cor Rómaloi. Luke-sa.
- Phíl Col Ephés Phile Jâme-se, Heb Act-si. Timothy Tít-su,
- Tim Peter-aup. Jude-pá. Revel-ous. John-noi ——
- 1. i. e. Elihu is more probably supposed to be the author of the book of job, about 1730 years before the birth of Christ. So, Moses, the author of the pentateuch, flourished in the year before Christ 1400. And so of the rest.—N. B. Ezra is thought by the Jewish doctors to have writ the chronicles [the 36th chapter of Genesis, the last of Joshua and Jeremiah; and to have revised and settled the canon of the Old Testament.]

2. i.e. Matthew writ his Gospel about the year of our Lord 41.

And so of the rest.

3. i. e. 27 books (from the year 41 to 97) in 36 years.

ENGLAND.

ITS KINGS, SINCE THE CONQUEST, WITH THE COMMENCEMENT OF THEIR REIGNS.

WILL Conq-sau, Ruf-koi. HEN 1st-ag. STEPH-bil. HE sec-buf.

RICH 1st-bein. JOHN-ann. HEN 3d-das. EDWARD 1st-doid.

Ed 2d-typ, 3d-tép. Ri sec-ipp. Hen 4th-toun, 5th-fat,

6th-fed. Ed 4th-faub, 5th, Rǐ 3d-feĭt. HE 7th-feil, 8th-lyn.

ED 6th-lop. MARY-lut. ELS-luk. JAME 1st-syt. Că-

CAR 2d-són. JAME se-seíl. WILL MA-sein. ANN-pýd. GEO-paf, pep.

1. i.e. William the conqueror began his reign (accounting the year to begin January 1) A. D. 1066.——N. B. 1000 is omitted throughout this list.

MONARCHIES.

THE GRAND OR UNIVERSAL ONES, THEIR RISE, FALL, AND CONTINUANCE.

ASS: Nǐu(A.M.)-ăpôh, Sar-tetú (BAB-ifan, Pers-táuboi, Grec-isel ÷

Cáss-ma-gre. Lys thrac-he-bós. Ptolem aé-lib-a-pálsy. Seleuc as.)

ROM: Jŭl-inýd, Jov-otat + East, Wést: taken Cón-loze, Rom-otun:

Alar(A.D.)-obz. Atti-flă. Géns-ful. Od-ops. Theód-oni. Tot-lop.

i.e. The-Assyrian Monarchy begun in Ninus (A.M.) 1748, and ended with Assaraddinus in 3235; heing swallowed up by the Babylonian, which ended (with Nabonadius) in 3419, (when Cyrus reigned over all Asia,) so the kingdom was translated to the Persians: from whom (by the conquest of Darius Codomannus) in 3617, Alexander translated it to the Grecians: after whose death, in 3625, it was (+) divided (after the confusion of a few years) among four of his followers. Cassander had macedon and greece: Lysimachus had thrace, with those parts of Asia that border on the hellespont and the bosphorus: Ptolemy had ægypt, libya, arabia, palestine, and coelo-syria: Seteucus, all the rest of asia. The --- Roman monarchy begun with Julius Caésar, in 3902; and ended in Jovian in 4313: after whose death it was (+) divided into the Eastern, and Western empires: the former of which ended by the taking of Constantinople (under Constantine Palæologus) in 5402; the latter by the taking of Rome (under Honorius) in 4359, A. D. 410, by Alaric, king of the Goths; after whom it was overrun and ravaged by Attila, king of the Huns, in 451; by Genseric, the Vandal, in 455; by Odoacer, king of the Heruli, in 476; by Theodoric, king of the Ostrogoths in 493; Totilas, the Ostrogoth, in 547.

WAR.

BODIES OF SOLDIERS.

- R] Déc-by. Cen-ázy. Man-eg. Turm-ig. Cohor-áug Legi-auth. Ph-eith.
- E] Comp-uz,ag. Squad-ag,eg. Ba-ig,eig. Brigadath,bag. Reg-ig,auth.
- 1. The Roman Legion consisted of (at a medium) 6000 men; though the number was different, at different times, from 3000 to 6666. And, in proportion, the other bodies, viz. Decuria, 10. Centuria, 100. Manipulus, 200. Turma, 300. Cohort, 600. Phalanx, 8000.

2. An English Regiment is from 300 to 1000 men. And, in proportion, the other bodies, viz. Company, 50-100. Squadron, 100-200. Battalion, 500-800. Brigade, 1000-1100.

NATURAL PHILOSOPHY.

PHYSICS.

ANNUITIES.

THEIR VALUE, FOR SEVERAL AGES OF LIFE.

A-bz,dei.¹ Az- $b\check{i}$,fo. Ez- $b\check{e}$,pei. 1z- $b\check{a}$,pe. Oz- $\check{a}z$, $\check{u}p$. Ol-n,oub.

Uz-ou,eb. Ul-k,ub. Auz-oi,sy. Aul-ău,lo. Oiz-l,id.

1. i. e. for (A) I year of age, the value of an annuity is (bz,dei) 10.28 years' purchase. And so of the rest. V. Halley, ap Lowthorp, vol. iii. p. 669.

ARKS.

OF NOAH, AND OF THE COVENANT OR TESTIMONY, THEIR DIMENSIONS IN CUBITS.

(Cov) L-e,re. Br-á,re. D-a,ré. (NOAH) L-ig. Br-uz. D-íz; for Birds-eg, Qu-ag.

i.e. The Ark --- of the Covenant was a sort of Chest in Length, Breadth, Depth, $2\frac{1}{2}$: $1\frac{1}{2}$: $1\frac{1}{2}$:—of Noan was a sort of Ship, 300: 50: 30: sufficient to hold (with food, &c.) all kinds of Birds (viz.) 200; Quadrupeds, 109. Vide Gen. vi. 15. Exod. xxv. 10.

ATMOSPHERE.

ITS HEIGHT, WEIGHT, ELASTICITY, &c.

Atmosphere (HIGH miles-óz1) on a foot-square présses esauz pounds:

On 15 feét (for a man) tuns-al: when least, tun-a,re less:2

WEIGHING as 1 —— to (water) eig —— to (mercury) azth eig.3

COMPREST, on Earth, to atpaun; by Art, 60 times more, to kesboz.

1. As appears by a calculation, made by M. de la Hire, from the crepuscula.

2. As appears by calculations made from the Torricellian experiments. V. Jurin, ap Varen. 1. 6. 19. 7.

3. i. e. The weight of air compared to that of water, is as I to

800, &c. V. Hauksbee's Exper.4. i.e. The common air we breathe, near the surface of the earth, is compressed, by the bare weight of the incumbent atmosphere, into a 13769th part of the space it would take up, were it at liberty. V. Boyle, ap. Wallis, hydrost, 13. Philos, Trans. n. 181.

DIVISIBILITY

OF MATTER, ACTUALLY GREAT.

By great Effluvia, in a long time, bodies lose but a small weight.

Candle, an inch, converted to LIGHT, - gives parts a nonillion.2

1. As is evident in perfumes, &c.

2. At which rate there must fly out of it, as it burns, in the second of a minute, 418,660,000.000,000.000,000.000,000.000,000.000,000.000,000 particles; vastly more than 1000 times 1000 millions the number of sands the whole earth can contain; reckoning 10 inches to 1 foot, and that 100 sands are equal to 1 inch. V. Nieuwent. Rel. Phil. vol. iii. p. 858.

DUCTILITY

OF BODIES, VERY GREAT.

Microscópical SPIDERS spín at a - tíme, at least, threads-auth.

GLASS may be dráwn 2 as a web, and knit to the 4th of a line space.3

GOLD, on Silver-wire, is drawn to the part of an inch-hom.

1. i. e. Such as are not visible but by a microscope.

2. "As fine as a spider's web;" but not long enough to be woven.

3. i.e. So, that the space in the middle of the knot shall not ex-

ceed one 4th of a line, or one 48th of an inch.

4. "To the 14-millionth part of an inch in thinness;" and yet is so perfect a cover to the silver, that there is not an aperture to admit alcohol of wine (the subtilest fluid in nature) nor even light itself. Reaumur.

EVAPORATION

FROM WATER, ITS QUANTITY.

FOOT-square, by heat, in a day, eváporates hálf of a wine pint.1

So, Medi tuns-udkým; near a thírd more than's brought by the rivers.

1. According to experiments made by Dr. Halley, ap Miscell. Curios. vol.i. To which it may be added, that the winds do sometimes carry off more than rises by heat.

2. Estimating the Mediterranean at 40 degrees long, and 4 broad,

3. V. Rivers; and, consequently, from the whole watery surface abundantly enough to furnish all the dews, rains, springs, rivers, &c. that are conveyed into the ocean.

MAN.

LIFE, MARRIAGE, PARTS, PERSPIRATION.

LIVE, out of ág, but—at Aú, so 1—at As, fy—at Es, du —at Is, bau

&—at Os, ăz—ăt Us, au—&—at Aus, ĭ ăt Ois, a.

MARR. a in ázf: bir-f3 (to búr as a, úu to a4) máles-bo to fem-at.

Bones-eni. Muscles-len. Teeth-id——Blood as ag to aauy, 6

Béats, in an hour, times-óth: and an óunce, at a time, is discharged:

52 féet in a mínute; as sépt-ag to 1 in the extremes."

PERSPIRE through pores (belth-whereof by one grain of sand may be covered)

5 părts ŏf 8 (ă dăy's foód) from hours 5, after méals, to the 12th, 3.º

1. i.e. Of the children born, out of 100, there are living at 6 years of age, but 64. And so of the rest. V. Halley, ap. Low thorp, vol. iii. p. 669.——N. B. On observations of this nature, drawn from the bills of mortality, is computed the value of annuities for different ages of life. V. Annuities.

2. i.e. l in 104 Marry. King.

3. i.e. Marriages, one with another, do each produce 4 births. Derham.

4. i.e. Births to Burials are as 1.6 to 1. Derham.

5. i. e. Males, born, to Females, are as 14 to 13. Graunt.

6. i.e. In a body, weighing 160 pounds, 100 thereof are Blood; understanding thereby not only the fluid contained in the veins and arteries; but also that in the lymphæ-ducts, nerves, and the other vessels, secreted from it, and returned into it. Keil.

7. i.e. 250 pounds in an hour; at the rate of the whole mass in

34 minutes.

S. i.e. The blood is driven out of the heart into the great artery with a velocity which would carry it 52 feet in a minute: a velocity to that of its motion in the remotest branches, as 100 septillions [7th period] to 1.

9. Within 5 hours after eating, there is perspired about 1 pound;

from the 12th to the 16th scarce half-a-pound. Sanctorius.

RIVERS.

THE QUANTITY OF THEIR WATERS.

At Kingstön-bridge, THAMES (yards Broad-áy, Deep.i)
2 mile an hour Runs:

tuns-ezm igth in a day; rh e ti po ni do niest nieper ahdoim.2

1. In a day, 48 miles, \$4,480 yards; which multiplied by (3 times 100, the profile of water at the bridge, viz.) 300 yards, gives

25,344,000 cubic yards of water, i. e. 20,300 000 tuns.

2. The most considerable rivers that fall into the MEDITERRANEAN sea are the Rhone, Ebro, Tiber, Po. Danube, Nile, Don, Niester, Nieper. Each of these is supposed to carry down 10 times as much water as the Thames, (not that any of them is so great; but so to allow for the other lesser rivers that fall into that sea.) Now the water of the Thames being computed, as above, at about 20,300,000 tuns; the 9 rivers aforesaid will amount, each, to 203,000,000; in all, 1,827,000,000 tuns. V. Evaporation.

MEMORIAL VERSES,

ADAPTED TO THE GREGORIAN ACCOUNT, OR NEW STYLE.

TO KNOW IF IT BE LEAP YEAR.

Leap year is given, when four will divide The centries complete, or odd years beside.

EXAMPLE FOR 1752.

4)52(0, Leap Year

EXAMPLE FOR 1800

4) 18 (2, not Leap Year

TO FIND THE DOMINICAL LETTER.

Divide the cent'ries by four; and twice what does remain,

Take from six; and then add to the number you gain The odd years and their fourth; which, dividing by seven,

What is left take from seven, and the letter is given.

EXAMPLE FOR 1752.

BY THE DOMINICAL LETTER, TO FIND ON WHAT DAY OF THE WEEK ANY DAY OF THE MONTH WILL FALL THROUGHOUT THE YEAR.

At Dover dwells George Brown, Esquire, Good Christopher Finch, and David Frier.*

EXAMPLE FOR MAY 9, 1752.

A being the Dominical Letter.

[•] See this noticed at page 94.

TO FIND THE GOLDEN NUMBER, CYCLE OF THE SUN, AND ROMAN INDICTION.

When one, nine, three, to the year have added been, Divide by nineteen, twenty-eight, fifteen: By what remains each cycle's year is seen.

EXAMPLES FOR 1752.

A GENERAL RULE FOR THE EPACT.

Let the cent'ries by four be divided; and then What remains multiplied by the number seventeen; Forty-three times the quotient, and eighty-six more Add to that; and dividing by five and a score; From eleven times the prime, subtract the last quote, Which, rejecting the thirties, gives th' epact you sought.

EXAMPLE FOR 1752.

4) 17 (1 G. No.= 5

$$-\frac{11}{4}$$
 $-\frac{11}{4}$ $-\frac{11}{$

TO FIND THE EPACT TILL THE YEAR 1900.

The prime wanting one, multiplied by eleven, And the thirties rejected, th' epact is given.

EXAMPLE.

TO FIND EASTER LIMIT, OR THE DAY OF THE PASCHAL FULL MOON, FROM MARCH 1, INCLUSIVE.

Add six to the epact, reject three times ten.
What's left take from fifty, the limit you gain:
Which, if fifty, one less you must make it, and even
When forty-nine too, if prime's more than eleven,

EXAMPLE.

Epact = 14
$$\begin{array}{c} 6 \\ -20 \\ 50 \\ -30 = \text{Limit.} \end{array}$$

TO FIND EASTER DAY.

If the letter and four from the limit you take, And what's left from next number which sevens will make; Adding then to the limit what last does remain, You the days from St. David's to Easter obtain.

EXAMPLE.

TO FIND THE AGE OR CHANGE OF THE MOON.

Janus 0, 2, 1, 2, 3, 4, 5, 6, 8, 8, 10, 10, these to the epact fix, The sum, bate 30, to the month's day add, Or take from 30, age, or change, is had.

EXAMPLE, MARCH 10, 1752.

Epact =
$$14$$
 $1 = \text{No. of the Month}$
 -15
 $10 = \text{Day of the Month}$
 $-25 \text{ Days} = \text{Moon's Age.}$

30 15

15 March = Change.

TO FIND THE TIME OF THE MOON'S COMING TO THE SOUTH, AND OF HIGH WATER AT LONDON BRIDGE.

Four times the Moon's age, if by five you divide, Gives the hour of her southing: add two for the tide.

EXAMPLE.

Moon's Age, 9 days

$$\frac{4}{5}$$
) 36 (7 h.
1 12 m = $\frac{1}{5}$ h.

7 h. 12 m. p. m. = Southing. 2 12 = High Water.

APPENDIX.

REPETES MOX; SIVE EST NATURÆ HOC, SIVE ARTIS Sat. iv. lib. 2.

Horace, in the above words, alluded to the Art of Memory, (Mnemonica) more than once praised by Cicero, who has also given precepts for the improvement thereof, in the third book of Rhetoric addressed to Herennius, where he says, "the Art consisted of fixing in the mind, upon certain conspicuous places, and on images formed of the things to be remembered and that were applied in order to those places; which last mentioned served instead of paper, and the images as so many words, whose regular application performed the office of writing." Quintilian likewise mentions Mnemonics in his "Institutes of an Orator," and Pliny notices them in his "Natural History," though the original inventor was the Greek poet Simonides, who, at a feast, recited a poem in honour of Scopas, victor in wrestling at the Olympic games, who gave the entertainment; but having digressed in praise of Castor and Pollux, his patron would pay only half the sum promised. saying he must get the other part from those deities who had an equal share in his performance. Immediately after, Simonides was told that two young men on white horses must needs speak with him. He had scarce got out of the house, when the room fell down, all the persons in it were killed, and their bodies so mangled, that they could not be known one from another: upon which Simonides recollecting the place where every one had sat, by that means distinguished them. Hence it came to be observed, that to fix a number of places in the mind in a certain order, was a This action of Simonides was afterwards help to the memory. improved into an art, the nature of which is this: form in the mind the idea of some large place or building, divided into a great number of distinct parts, ranged and disposed in order: frequently revolve these in your thoughts, till able to run them over one after another without hesitation, beginning at any part: then impress upon your mind many images of living creatures, or any

other sensible objects most likely to be soonest revived in the These, like short-hand or hieroglyphics, must stand to denote an equal number of other words, not otherwise so easily to be remembered. When therefore you have a number of things to commit to memory in a certain order, place these images regularly in the several parts of your building: and thus, by going over those parts, the images placed in them will be revived in the mind: which will give the things or words themselves in the desired order. The advantage of the images seems to be, that, as they are more likely to affect the imagination than the words, they will be more easily remembered. Thus, if the image of a lion be made to signify strength, and this word be one of those I am to remember, and is placed in the porch; when, in going over the several parts of the building, I come to the porch, I shall sooner be reminded of that image than of the word strength. This is the artificial memory both Cicero and Quintilian speak of; but seems, indeed, a laborious way: fitter for assisting to remember any number of unconnected words than a continued discourse. Grecian orators also made use of the statues, paintings, ornaments, and other external circumstances, of the places where they harangued. for reviving, in progressive order, the topics and matter of their orations; and though among the Latins, Cicero averred that Mnemonics were the basis of his excellent memory, and their practice was cultivated by others, of whom Hortensius, Crassus, Julius Cæsar, and Seneca, are particularly noticed, yet it is not known that any modern orator has made use of this art; however, in allusion to it, we still call the parts of a discourse places or topics, and say, in the first place, in the second place, &c.

The science appears to have lain dormant in after ages, till Raimond Lullé, about the close of the thirteenth century, brought it once more into notice, and it has ever since been called "Lullé's Art."

Scepsius-Metrodorus, Carneades, Hippias, and Theodectes, among the aucient Greeks, practised or wrote upon this method. The principal Romans are mentioned above. The writers upon the art, from the time of Lullé to near the end of the seventeenth century, principally consisted of Marsilius-Ficinus, Grataroli, Bruschius, Muretus, Schenkel, Martin-Sommer, Horstius, Johnston, Morhof, and Paschius; with Gebelin in the eighteenth.

Muretus declares that he dictated between two and three thousand unconnected Greek, Latin, or barbarous words, to a young Corsican practising that art, who immediately spoke them regularly in order, and afterwards repeated the same backwards without any error, asserting that he would undertake to say thirty-six

thousand words in a similar manner.

Lambert or Lamprecht Schenkel, born at Pois-le-Duc, in 1547, acquired celebrity for his discoveries in the Mnemonic art. and to propagate these, he travelled through the Netherlands. Germany, and France; where his method was inspected by the great, and transmitted from one university to another. Schenkel brought himself through every ordeal, to the astonishment and admiration

of his judges. The rector of the Sorbonne, at Paris, permitted him to teach his science at that University; and Marillon, Maître des Requêtes, gave him an exclusive privilege for practising Mnemonics throughout the French dominions. His auditors were. however, prohibited from communicating this art to others, under a severe penalty. Schenkel delegated the licentiate Martin-Sommer, and invested him with a regular diploma for circulating his art, under certain stipulations, through Germany, France, Italy, Spain, and the neighbouring countries. Sommer now (1619) published a Latin treatise on this subject, under the title of "Brevis Delineatio de Utilitatibus et Effectibus admirabilibus Artis Memoriæ." In this he announces himself as commissioned by Schenkel to instruct the whole world.

"A lawyer," says he, "who has eauses to conduct, may, by the assistance of my Mnemonics, stamp them so strongly on his memory, that he will know how to answer each client, in any order, and at any hour, with as much precision as if he had but just perused his brief. And in pleading, he will not only have the evidence and reasonings of his own party at his fingers' ends. but all the grounds and refutations of his antagonist also! Let a man go into a library, and read one book after another, yet shall he be able to write down every sentence of what he has read many days after at home. The proficient in this science can dietate matters of the most opposite nature, to ten, or thirty writers, alternately. After four weeks' exercise, he will be able to class twenty-five thousand disarranged portraits within the space of a few minutes."

The Art of Memory is little more than the art of attention; and this method of it, which appears more connected with Egyptian hieroglyphics than has generally been thought, seems to consist in nothing else but a certain method of coupling or associating the ideas of things to be remembered, with the ideas of other things already disposed orderly in the mind, or that are before the eyes.

Many have been the attempts to assist the memory. Some have had recourse to medicine, such as Horstius, Marsilius-Ficinus. Johnston, and others. That good health, a good digestion, and a mind free from care, are helps in this respect, is an old observa-That attention, application, frequent recapitulation, are necessary, is known to every one. But whether, besides natural health, and parts, and the exercise of our faculties, art may not

give a further assistance to memory has been a question.

Within the present century this science has been revived and greatly studied in Germany and France; Dr. Klüber published at Erlangen, in the year 1802, a German translation, illustrated by notes, of "Gazypholium Artis Memoriæ per Schenkelium," which the Doctor has entitled "Compendium of Mnemonics, or the Art of Memory, at the beginning of the seventeenth Century, by L. Schenkel and M. Sommer;" but the modern restorer of this art is ! M. Aretin, who exacted from his pupils a promise not to write down his lectures; and though he permitted one pupil. M. Kaestner, to teach at Leipsic, yet it was on the express condition of not allowing his heavers to write. According to a book, said to have been composed by a child of twelve years of age, in the catalogue for the September fair at Leipsic, 1806, Mnemonica may be so taught as to give a memory to individuals of every age.

In France, the celebrated astronomer M. de Lalande bears testinony to the following facts: "I have witnessed the extraordinary effects produced on the memory by the method of M. de Feinaigle: one of his pupils is able to repeat, in any order, without the least mistake, a table of fifty cities in all parts of the world, with the degrees of longitude and latitude in which they are situated; the same is the case with chronology: in the 'Annuaire' I have inserted 240 dates from ancient and modern history, and M. de Feinaigle's scholars repeat them all—an astonishing aid

in the study of geography and history!"

Neither has this science been unattended to in Great Britain; for, besides Johnston already mentioned, who was a Scotch physician, practising at the courts of James and Charles I. Mnemonics are frequently mentioned by the great Chancellor Bacon, as in his "Treatise on the Advancement of Learning;" his "Natural History." wherein he states, "The brains of some creatures, when their heads are roasted, taken in wine, are said to strengthen the memory: as the brains of hares, hens, deer, &c. and this faculty seemeth to be incident to those creatures that are fearful." In the tract "De Augmentis Scientiarum," Bacon recommends theatrical action as an assistant to memory, and also alludes to the system of Simonides as founded on the theory of emblems, by saying, "Emblem reduceth conceits intellectual to images sensible, which always strike the memory more forcibly, and are therefore the more easily imprinted, than intellectual conceits." In the "Novum Organum" the science is again mentioned under the appellation of "Order or Distribution in respect to places, furniture, persons, animals, plants, words, letters, characters, &c.

Dr. Thomas Fuller, the author of the "llistory of the Worthies of England," was also an adept at this art; he would repeat five hundred strange words after twice hearing them, and make use of a sermon verbatim, if he once heard it: after one inspection, he told in exact order, both forwards and backwards, the name of every sign from Temple Bar to the furthest part of Cheapside, in the city of London; he would write the first words of a number of lines near the margin of a sheet of paper, then, by beginning at the head, would so completely fill up every line, and without spaces, interlineations, or contractions, so connect the whole, that the sense would be as perfect, as if regularly written in the ordinary way.

The following works were also expressly published on this subject: "Muemonica, or the Art of Memory, drained out of the pure Fountains of Art and Nature, digested into three books; also a Physical Treatise of Cherishing Natural Memory; diligently collected out of divers Learned Men's Writings. By John Willis.

Batchelour in Divinity, in 1661."

This author's method commences with rules for remembering common affairs, next words, then phrases, afterwards sentences, and long speeches. The second book treats of remembering without writing, next by certain verses purposely borne in mind and by extempore verses. The third treats of Repositories, in which is a print of an imaginary building of hewn stone in form of a theatre, where all things intended to be remembered are supposed to be arranged in order, and he gives various specimens of ideas to exemplify his plan.

"The Art of Memory, a Treatise useful for all, especially such as are to speak in public. By Marius D' Assigny, B. D. 1699."

This gentleman's mode begins with a chapter on the soul or spirit of man, and in the succeeding chapters, after treating of memory, temper, &c. he gives in the sixth a number of receipts for cleansing the hair, comforting the brain, and strengthening the memory, by means of plasters, ointments, and powders, and in his other chapters proceeds with some instructions for remembering words and things; as, for instance, he states, that "others, instead of a house, palace, or building, have chosen such beasts as answer to all the alphabetical letters in the Latin tongue, dividing every one into five parts, viz. head, fore feet, belly, hinder feet, and tail, so that by this means the fancy may have one hundred and fifteen places to imprint the images of memorable things."

Heidegger, who about the year 1740 styled himself Surintendant de Plaisirs d'Angleterre, at the Opera in the Haymarket, excelled Dr. Fuller, by being able to repeat the names of all the signs in their due order on each side of the way from Charing Cross to Aldgate, a space containing near one thousand four hundred houses.

most of which at that period had signs.

Dr. Rees, editor of Chambers's Cyclopædia says, "Mnemonic tables exhibit in a regular manner what is to be remembered of the same subject. And although the sciences ought to be taught scientifically as much as possible, and every thing should so be placed as to be intelligible, and demonstrable from what has proceeded, yet tables ought not to be rejected, as they are helps to retain the doctrines of which the mind has had a sufficient evidence. In such tables the properties of things are to be expressed concisely: illustrations and demonstrations should be left out, as the proposition should have been made sufficiently clear and certain before it is registered in the table-hence the contents of such tables ought only to be definitions and propositions relative to the subject. If a subject require a long table, it may be subdivided into smaller, by making first one of the most general heads, and referring from each of these to a separate table; by this means the order and connexion of the whole will be preserved. Such tables would produce a local and artificial memory of great use to the retention and recollection of things: they would greatly tend to a distinct view of the properties of their subjects, and facilitate recapitulation. Besides, as the expressions used in such tables ought to be concise, so as just to excite the idea of the object to

be remembered, soon after that idea has been acquired; af Pr (some time) a certain obscurity will be found in perusing the tables, which will give timely warning that our ideas begin to fade, and that they ought to be renewed; and this may be done without

much trouble, if not delayed too long."

"Men complain of nothing more frequently (says Beattie in the 'Theory of Moral Science') than of deficient memory: and indeed every one finds, that, after all his efforts, many of the ideas which he desired to retain have slipt irretrievably away; that acquisitions of the mind are sometimes equally fugitive with the gifts of fortune; and that a short intermission of attention more certainly lessens knowledge than impairs an estate. To assist this weakness of our nature, many methods have been proposed; all of which may be justly suspected of being ineffectual: for no art of memory, however its effects may have been boasted or admired, has been ever adopted into general use: nor have those who possessed it appeared to excel others in readiness of recollection or multiplicity of attainments. The reader who is desirous to try the effect of those helps, may have resource to a treatise entitled 'Grey's Memoria Technica, or Method of Artificial Memory:' but the true

method of memory is attention and exercise."

A writer in the "Monthly Magazine" for September, 1807, under the signature of Common Sense, tells us the Art of Mnemonics is founded simply on the powers of association in the human mind. Every person who has twice travelled the same road, will probably have brought to his recollection, during the second journey, the feelings of his mind, the subjects of conversation, and other trivial incidents which occurred during his first journey, the moment he comes again within sight of the successive objects: these recollections will take place exactly in the same order as the objects which bring them again before the mind. All that is wanted to enable us to retrace any set or succession of ideas, is an unvarying continuity of objects with which we can associate Any person who wishes to try an experiment on this power of association, need only make use of the succession of rooms. closets, staircases, landing-places, and other remarkable spots or divisions of his own house. Let him apply any word or idea to the several parts, in determined order, and he will find it almost impossible, in recalling the same, not to associate the idea or word previously annexed to each part; for example, a person may learn the succession of the kings of England in ten minutes, by annexing the name of each succeeding monarch to the successive rooms, &c. of the house, regularly descending or ascending; but any other permanent and familiar class of objects will, in general, answer the purpose better. I was educated in the vicinity of Oxford-street, and the streets running therefrom, south and north, (beginning at Charles-street, Soho-square, and proceeding to Park-lane, and back again on the other side to Hanway-yard,) are the permanent and familiar objects I use for the purpose of successive association. The counties in England, the kingdoms and countries throughout

the world, the villages, and other objects on a great road, or the streets of a city, are all well suited to this business of association: and any of them may be taken indifferently by various persons. according to their acquaintance therewith. The greater the variety of ideas connected with this set of objects, which may be called the associating key, the more easy and certain is the power of recollection. By this method I once committed to memory, in a single morning, the whole of the propositions contained in the three first books of Euclid, with such perfection, that I could for years afterwards specify the number of the book on hearing the proposition named, and recite the proposition on hearing the number and the book; and have frequently, in mixed companies, repeated backwards and forwards from fifty to a hundred unconnected words, which have been but once called over. To prove the simplicity of the plan. I taught two of my own children to repeat fifty unconnected words in a first lesson, of not more than half an hour's continuance.

CHRONOLOGICAL WORDS

ON DR. GREY'S PLAN.

Creothf, the creation of the world, 4004 years A. C. Deletok, the deluge, 2318. Babetheop, the building of Babel, 2247. Argonation, the Argonautic expedition, 1359. Lycurgoudau, the birth of Lycurgus, 926. Olympois, the Olympic games, 776 Romput, the foundation of Rome, 753 Ninevsyd, the destruction of Nineveh, 602. Marathony, the battle of Marathon, 490. Alexanderilau, the birth of Alexander, 356. Ipsica, the battle of Ipsus, 301. Cheronitei, the battle of Cheronæa, 33S. Pharsalok, the battle of Pharsalia, 48. Philippod, the battle of Philippi, 42. Actita, the battle of Actium, 31. Jesit, the resurrection of Jesus Christ, A. D. 33. Herculanoin, the destruction of Herculaneum, 79. Jerusaloiz, the destruction of Jerusalem, 70. Romoaz, Rome sacked by Alarie, 410. Romopy, Rome being taken by Odoacer, 470. Mahomupa, the birth of Mahomet, 571. Mahomaudd, the Hegira of Mahomet, 622. Mahomsid, Mahomet's death, 632. Jerusalstan, Jerusalem taken by Omar, 636. Charlemoife, the birth of Charlemagne, 742. Charlemeiyz, Charlemagne crowned at Rome, 800. Alfreiouz, Alfred divided England into counties, &c. 890. Canutazap, Canute became king of England, 1017. Machazoy, Macbeth usurped the throne of Scotland, 1010. Williazsau, England conquered by William of Normandy, 1066. Crusadazoul, the first crusade commenced, 1095. Henrag, Henry I. commenced his reign, 1100. Ghibelaglo, the Ghibelines and Guelphs disturbed Italy, 1154. Jerusalagkoi, Jerusalem taken by Saladin, 1187. Constantinopladyd, Constantinople taken by the French and Venetians, 1202

Turkadouk, the Turkish empire commenced under Othman, 1298. Bannockataf, the battle of Bannockburn, 1314. Crecatos, the battle of Crecy, 1346. Poicatlau, the battle of Poictiers, 1356 Otterbateik, the battle of Otterburn, 1388. Tamerlafyd, the victory of Tamerlane at Angoria, 1402. Agincourafal, the battle of Agincourt, 1415. Columbafond, Columbus discovered Hispaniola and Cuba, 1492. Cabotafoun, Sebastian Cabot landed in North America, 1499. Maximilalyz, Maximilian divided Germany, 1500. Lutheralboi, Luther commenced the Reformation, 1517. Charlalbon, Charles V. elected emperor, 1519. Rhodalde, Rhodes taken, 1522. Pavaldu, the battle of Pavia, 1525. Romaldoi, Rome taken by Charles V. 1527. Passalud, the treaty of Passau, 1552. Vervalouk, the peace of Vervins, 1598. Pragasez, the battle of Prague, 1620 Barbadasel, the planting of Barbadoes, 1625. Lutzasid, the battle of Lutzen, 1632. Westphalasok, the treaty of Westphalia, 1648. Nimegbaupei, the peace of Nimeguen, 1678. Revoluskei, the revolution in Britain, 1688. Gibraltapzo, Gibraltar taken by Admiral Rooke, 1704. Blenheiboiyf, the battle of Blenheim, 1704. Malplaboizou, the battle of Malplaquet, 1709. Dettinapot, the battle of Dettingen, 1743. Fontenboifu, the battle of Fontenoy, 1715. Mindenaplou, the battle of Minden, 1759. Grenadapoin, Grenada taken by the French, 1779., Bastilapkou, the Bastile destroyed, 1789. Louisapni, Louis XVI. guillotined, 1793. Camperdapnoi, the Dutch defeated off Camperdown, 1797. Nilapnei, the battle of the Nile, 1798. Seringapuou, the taking of Seringapatam, 1799. Trafalgakyl, the battle of Trafalgar, 1805.

Regenakba, Prince of Wales appointed Regent 1811. Moscobeibe, the burning of Moscow, 1812. Waterlakal, the battle of Waterloo, 1815. Geo-fobeidy, accession of George IV. 1820. Napobeida, the death of Napoleon Buonaparte, 1821. Will-fobeity, accession of William IV. 1830.

CHRONOLOGICAL EXERCISES

ON DR. GREY'S METHOD OF ARTIFICIAL MEMORY.

FORM memorial words expressive of the era of the building of Babel, 2217 years before Christ.

The building of Thebes, 1493.

The building of Corinth, 1320 The bui'ding of Tyre, 1252.

The burning of Troy, 1184.

The building of Carthage, 869.

The foundation of Byzantium, 658

The taking of Babylon by Cyrus, 538.

The battle of Salam's, 480.

The battle of Mantinea, 363.

The battle of Arbela, 331.

The taking of Corinth by the Romans, 146.

The battle of Pharsalia, 48; and the death of Julius Cæsar, 41 vears A.C.

The commencement of Trajan's reign, A.D. 98.

The commencement of Aurelian's reign, 270.

Charlemagne sole monarch of France, 772.

The battle of Roncesvalles, 778.

The commencement of the reign of Alfred, 872.

The commencement of the reign of Canute, 1017. The commencement of the reign of Stephen, 1135.

The commencement of the reign of Margaret of Norway, 1250.

The battle of Angoria, 1402.

The battle of Barnet, 1471.

The revolution in England, 168S

The battle of Dettingen, 1743. The siege of Gibraltar, 1779.

The destruction of the Bastile, 1789.

The union between Great Britain and Ireland, 1800.

The surrender of Alexandria to the British troops, 1801.

THE USE OF THE INDEX.

This following Index may be useful in two respects: either as it will serve to try the proficiency of the learner, who may exercise himself in resolving and explaining the memorial words, thus separated from their proper classes, and intermingled with each other, (which will at the same time be a means to fix them the better in his memory;) or, as it may be to those who are a little acquainted with the art, but have not charged their memories with the technical ines, a ready help to answer many questions in chronology, geography, history, &c. without the trouble of searching for them in the tables: to make which the easier in the historical and chronological part, it was thought proper to add a letter or two at the end of each word; by the help of which, and the beginning of the words together, any one, who is but tolerably acquainted with history, and is master of the general key, will readily know what the words stand for. The principal abbreviations are as follow:

AB. Archbishop of Canterbury.

Ær. Æra or epocha.

B. Battle.

B. R. Bishop of Rome.

C. Council.

Ep. Epistle, i. e. the time of writing it.

Ev. Evangelist.

E. R. Emperor of Rome.

E. E. Emperor of the East. E.W. Emperor of the West

F. Father.

11. Heretic, Schismatic, &c.

H. P. High Priest.

J. Judge of Israel.

K. King.

K. Ass. King of Assyria. K. B. King of Babylon.

K. E. King of England.

K. Eg. King of Egypt.

K. Ju. King of Judah.

K. Is. King of Israel. K. M. King of Media.

K. Ma. King of Macedon.

K. P. King of Persia.

K. R. King of Rome.

K. S. King of Syria.

L. Lawgiver, Learned Man,

Author, &c. Leg. Legate.

Mart. Martyr.

P. Pope.

Pa. Patriarch.

Ph. Philosopher.

Po. Poet,

Pr. Prophet. Q. Queen.

W. War.

= Different Names of the same

Those words which have no letter at the end of them, denote some fact in history; as Abaneb, the calling of Abraham.

The italic letters represent the year before or after Christ. The small capitals M and P in the middle of a word denote the year of the world, or of the Julian period; as Troypilta, &c.

Be careful to give the right pronunciation; and note, that the accent, unless where otherwise marked, or when the penultima, or last syllable but one, is long by position, is always on the antepenultima, or last syllable but two.

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GREY'S MEMORIA TECHNICA:

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CONSTRUCTION AND USE

OF THE

GEOGRAPHICAL WORDS.

Or words consisting of two parts in the same character, joined with a hyphen, the first part denotes a city, town, people, &c. in a kingdom, region, or province, denoted by the latter: the words in *Italic* letters signifying places in ancient Geography, the words in *Roman* letters, places in modern Geography. Thus, Abdérthra; Abdera, a town in ancient Thrace. Agine-art; Agincourt in Artois.

Words in a parenthesis denote that the place represented by the first syllable or syllables, is one of those represented by the latter, as (Antig-lee) Anligna, one of the Leenard Islands; (Cub-ant) Cuba, one of the Antilles.

The letters N. E. S. W. either following or in a word, denote the situation of a place: as Antill-luc S. the Antilles Islands, South of the Lucayos; Madéir-barb W. Madeira Isles, West of Barbary; AmnEmoab, the Ammonites resided on the North-East of Moab. S. preceding a word signifies Saint.

The letters G.S. denote Sacred Geography.

A small capital at the end of a word denotes a particular portion or division of the region designed by the preceding letters; as $\mathcal{E}qui\cdot lats$ points out that the $\mathcal{E}qui$ dwelt in Latium Novum; Batch-tartar, that Batchiserai is situated on the peninsula of Little Tartary.

Italies joined with a hyphen denote the latitude and longitude of a place: as, Agrêk-oit, the latitude of Agra 28 deg. the longitude 73.

Italics joined with a comma denote the proportion of the kingdom, &c. to Great Britain; as Germt,ut, Germany to Great Britain as 3.53 to 1.

Italics joined without a hyphen generally denote the distance from London or Jerusalem; as Pardel sc. Paris from London about 225 miles; Antiochig, Antioch from Jerusalem about 300 miles.

Syllables joined with this mark = denote correspondent places of ancient and present geography: as, Ach=livad, the ancient Achaia, the present Livadia.

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[•] The reader will find in this Index also, many of the words pore fully expressed than they are in the body of the work.

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